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STATEMENT OF SECRETARY OF DEFENSE ROBERT S. McNAMARA  
BEFORE THE SENATE SUBCOMMITTEE ON DEPARTMENT OF  
DEFENSE APPROPRIATIONS  
ON THE FISCAL YEAR 1964-68 DEFENSE PROGRAM AND 1964 DEFENSE BUDGET  
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CONTENTS

	<u>PAGE NO.</u>
I. INTRODUCTION. ....	3
A. APPROACH TO THE FY 1964-68 PROGRAM AND THE FY 1964 BUDGET .....	3
B. ASSESSMENT OF THE INTERNATIONAL SITUATION AS IT BEARS ON MILITARY POLICIES AND PROGRAMS. ....	5
1. Latin America. ....	6
2. Africa. ....	8
3. Near East .....	9
4. South Asia .....	10
5. Southeast Asia. ....	12
6. Far East. ....	14
7. NATO. ....	14
C. STRENGTHS AND WEAKNESSES OF THE COMMUNIST BLOC. ....	19
1. The Soviet Union. ....	20
2. Communist China. ....	23
D. IMPACT OF THE DEFENSE PROGRAM ON THE ECONOMY. ....	24
1. Defense Contracting. ....	24
2. Balance of Payments .....	25
E. ARMS CONTROL AND DISARMAMENT. ....	27
II. STRATEGIC RETALIATORY FORCES .....	28
A. THE REQUIREMENT. ....	28
B. PRESENT U.S. STRATEGIC RETALIATORY CAPABILITIES. ....	30
C. FUTURE STRATEGIC RETALIATORY FORCES. ....	30
1. The Future of Manned Strategic Aircraft. ....	32
a. B-52 Procurement. ....	32
b. RS-70 .....	35
c. SKYBOLT .....	38
2. Bomber Forces .....	41
3. ICBM and POLARIS Forces .....	42
a. ATLAS .....	42
b. TITAN .....	42
c. MINUTEMAN .....	43
d. POLARIS .....	43
e. Penetration Aids .....	44
4. Other Strategic Retaliatory Force Programs .....	45
a. QUAIL .....	45
b. Tankers .....	46
c. Strategic Reconnaissance Aircraft .....	46
d. REGULUS .....	46
D. COMMAND AND CONTROL .....	46
E. NEW STRATEGIC MISSILE SYSTEMS .....	48
F. ADEQUACY OF THE PROPOSED FORCES .....	49
G. FINANCIAL SUMMARY .....	49

~~SECRET~~

	PAGE NO.
III. CONTINENTAL AIR AND MISSILE DEFENSE FORCES.....	50
A. THE DEFENSIVE TASK.....	50
B. DEFENSE AGAINST MANNED BOMBERS.....	51
1. Semi-automatic Ground Environment System(SAGE)	51
2. Other Aircraft Control & Warning System Changes	53
3. Manned Interceptors .....	53
4. Surface-to-Air Missiles.....	55
C. DEFENSE AGAINST ICBM ATTACK .....	56
1. Ballistic Missile Early Warning System (BMEWS)	56
2. Missile Defense Alarm System (MIDAS).....	57
3. Bomb Alarm System.....	58
4. NIKE-ZEUS.....	58
D. DEFENSE AGAINST SUBMARINE-LAUNCHED MISSILES.....	61
E. SPACE SURVEILLANCE.....	63
F. FINANCIAL SUMMARY.....	64
IV. GENERAL PURPOSE FORCES .....	65
A. THE REQUIREMENTS .....	65
B. ARMY GENERAL PURPOSE FORCES.....	72
1. Active Forces .....	72
2. Army Reserve Components.....	75
3. Army Procurement .....	77
a. Aircraft.....	78
b. Missiles .....	79
c. Weapons and Combat Vehicles .....	80
d. Tactical and Support Vehicles .....	81
e. Communications and Electronics .....	81
f. Other Support Equipment.....	81
g. Ammunition .....	82
h. Production Base Program.....	82
C. NAVY GENERAL PURPOSE FORCES.....	82
1. Navy Forces - Ships .....	82
a. Attack Carrier Forces.....	83
b. Anti-Submarine Warfare Carrier Forces ..	83
c. Cruiser Forces .....	84
d. Destroyer and Escort-Type Ships.....	86
e. Small Patrol Craft.....	88
f. Attack Submarine Force.....	88
g. Mine Warfare Force.....	89
h. Amphibious Ships.....	89
i. Logistics Support Auxiliary Ships.....	90
j. Landing and Service Craft.....	90
k. Naval Reserve .....	90
2. Marine Corps Forces.....	91
3. Navy and Marine Corps Operating A/C Inventories	92
4. Navy and Marine Corps Aircraft Procurement....	92
5. Other Navy Procurement.....	95
6. Marine Corps Procurement.....	96

~~SECRET~~

	PAGE NO.
D. AIR FORCE GENERAL PURPOSE FORCES.....	97
1. Tactical Fighter Forces.....	98
2. Tactical Reconnaissance Forces.....	99
3. Interceptor Aircraft.....	100
4. Tactical Missiles.....	100
5. Air National Guard Forces.....	101
6. Other Air Force Procurement.....	101
7. Tactical Air Shelter Construction.....	102
E. TACTICAL EXERCISES .....	103
F. FINANCIAL SUMMARY.....	104
V. AIRLIFT AND SEALIFT FORCES.....	105
A. AIRLIFT.....	106
B. SEALIFT.....	108
C. FINANCIAL SUMMARY.....	109
VI. RESERVE AND NATIONAL GUARD FORCES.....	110
A. GENERAL.....	110
B. ARMY RESERVE.....	110
C. ARMY NATIONAL GUARD.....	110
D. NAVAL RESERVE.....	111
E. MARINE CORPS RESERVE.....	111
F. AIR FORCE RESERVE.....	111
G. AIR NATIONAL GUARD.....	111
H. RESERVE OFFICER PARTICIPATION IN CIVIL DEFENSE PROGRAM	112
I. OFFICER EDUCATION PROGRAM (ROTC).....	112
J. FINANCIAL SUMMARY.....	114
VII. RESEARCH AND DEVELOPMENT.....	115
A. RESEARCH.....	117
B. EXPLORATORY DEVELOPMENTS.....	117
1. Army .....	118
2. Navy .....	118
3. Air Force.....	119
4. Advanced Research Projects Agency (ARPA).....	119
a. Project DEFENDER.....	119
b. Project VELA .....	119
c. Project AGILE.....	119
d. Propellant Chemistry.....	119
C. ADVANCED DEVELOPMENTS.....	120
1. Army.....	121
2. Navy.....	123
3. Air Force .....	123
D. ENGINEERING DEVELOPMENTS .....	126
1. Army .....	126
2. Navy .....	128
3. Air Force.....	130



E.	MANAGEMENT AND SUPPORT .....	132
1.	Army .....	132
2.	Navy .....	132
3.	Air Force .....	133
F.	EMERGENCY FUND .....	134
G.	SPACE .....	134
H.	FINANCIAL SUMMARY .....	137
VIII.	GENERAL SUPPORT .....	138
A.	INDIVIDUAL TRAINING AND EDUCATION.....	138
1.	Recruit Training .....	138
2.	Technical Training .....	139
3.	Professional Training .....	139
4.	Flight Training.....	140
5.	Other .....	141
B.	INTELLIGENCE AND SECURITY .....	141
1.	.....	141
2.	.....	142
C.	COMMUNICATIONS .....	142
D.	LOGISTICS SUPPORT .....	144
1.	Transportation.....	144
2.	Procurement and Supply Operations .....	144
3.	Industrial Preparedness.....	144
4.	Military Family Housing .....	145
5.	Materiel Maintenance.....	146
E.	MEDICAL SERVICES .....	146
F.	COMMAND AND GENERAL SUPPORT .....	147
1.	Command and Direction.....	147
2.	Weather Service .....	147
3.	Air Rescue/Recovery .....	148
4.	National Emergency Command Posts .....	148
5.	Transients, Patients and Prisoners.....	149
6.	Construction Support Activities .....	149
7.	DEEP FREEZE.....	149
8.	Other Command and General Support Activities.....	150
G.	DEFENSE ATOMIC SUPPORT PROGRAM .....	150
H.	MISCELLANEOUS DEPARTMENT-WIDE ACTIVITIES .....	151
1.	Contingencies .....	151
2.	Claims .....	151
3.	All Other .....	151
I.	RETIRED PAY .....	152
J.	OTHER "ACROSS-THE-BOARD" SUPPORT TYPE MATTERS.....	152
1.	Mission Support Aircraft .....	152
2.	Over-all Civilian Employment Levels .....	153
K.	FINANCIAL SUMMARY .....	153

IX. CIVIL DEFENSE .....	154
A. SHELTER SURVEY, MARKING AND STOCKING .....	155
B. SHELTER FINANCING PROGRAM .....	156
C. SHELTER IN FEDERAL BUILDINGS .....	157
D. WARNING AND DETECTION .....	157
1. Warning and Alert .....	157
2. Monitoring Radiological Fallout .....	158
E. COMMUNICATIONS AND CONTROL .....	158
F. TRAINING, EDUCATION AND PUBLIC INFORMATION .....	158
G. FINANCIAL ASSISTANCE TO STATES .....	159
H. RESEARCH AND DEVELOPMENT .....	160
I. MANAGEMENT .....	160
J. FINANCIAL SUMMARY .....	160
X. ORGANIZATION AND MANAGEMENT .....	161
A. ORGANIZATIONAL CHANGES .....	162
1. Strike Command .....	162
2. Defense Communications Agency.....	163
3. Defense Intelligence Agency.....	163
4. Army .....	163
5. Air Force.....	164
6. Navy.....	164
7. Defense Supply Agency .....	164
8. Single Manager Training Responsibilities .....	165
9. Joint Chiefs of Staff Organization .....	165
B. FIVE-YEAR COST REDUCTION PROGRAM .....	166
1. Buying Only What we Need .....	166
a. Refining the Requirements Calculations .....	166
b. Increased Use of Excess Inventories .....	167
c. Eliminating "Goldplating" of Tech. Specifications .....	168
2. Buying at the Lowest Sound Price .....	168
a. Shifting From Non-Competitive to Competitive Procurement .....	168
b. Shifting From Cost-Plus-Fixed-Fee (CPFF) to Fixed Price and Incentive Contracts .....	170
3. Reducing Operating Costs .....	171
a. Terminating Unnecessary Operations - By Closing or Reducing Unneeded Bases and Installations .....	171
b. Standardizing and Simplifying Paperwork and Procedures .....	172
c. Consolidating and Increasing Efficiency of Operations .....	173
C. IMPROVING OUR PERSONNEL MANAGEMENT .....	175
1. Over-all Staffing Levels .....	175
2. Military Personnel.....	175
a. Extension of the Selective Service Act .....	176

[REDACTED]

b. Military Personnel Compensation .....	176
c. Review of the Officer Personnel Legislation ...	179
d. Other Personnel Legislation .....	180
e. Active Duty Military Personnel .....	180
XI. FINANCIAL SUMMARY .....	181

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# TABLES

TABLE NO.	PAGE NO.
1. Financial Summary .....	182
2. Strategic Retaliatory Forces .....	183
3. Continental Air and Missile Defense Forces .....	184
4. General Purpose Forces - Army .....	185
5. Army Reserve Components Program .....	186
6. Army Procurement .....	187
7. General Purpose Forces - Navy Ships.....	189
8. General Purpose Forces - Navy Ship Construction and Authorization Program .....	190
9. General Purpose Forces - Navy and Marine Corps Operating Aircraft .....	191
10. General Purpose Forces - Navy and Marine Corps Aircraft Procurement Program .....	193
11. General Purpose Forces - Air Force and Air National Guard ...	195
12. General Purpose Forces - Air Force Aircraft Procurement Program	196
13. Airlift and Sealift Forces.....	197
14. Airlift and Sealift Procurement Program .....	198
15. Summary of Strength, Drill Status, etc., for Reserve and Guard Forces .....	199
16. Financial Summary of Research and Development .....	200
17. Recapitulation of Department of Defense Space Program .....	203
18. General Support.....	204
19. Financial Summary of Civil Defense.....	205
20. Department of Defense Procurement and Logistics Cost Reduction Program .....	206
21. FY 1963 Budget Programs and New Obligational Authority, by Appropriation Title .....	207
22. FY 1964 Budget Programs and New Obligational Authority, by Appropriation Title.....	209

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STATEMENT OF SECRETARY OF DEFENSE ROBERT S. McNAMARA  
BEFORE THE SENATE SUBCOMMITTEE ON DEPARTMENT OF DEFENSE APPROPRIATIONS  
ON THE FISCAL YEAR 1964-68 DEFENSE PROGRAM AND 1964 DEFENSE BUDGET

Mr. Chairman and Members of the Committee:

It is again our privilege to present to you our Defense program projections for the next five years, and our budget proposals for the coming fiscal year. The form of this statement is similar to the one I presented to you last year. It is arranged in the same manner in which the Defense program is developed, namely, in terms of the principal missions of the Defense establishment, rather than by organizational component or by budget category.

Later in your hearings the Defense Comptroller will summarize the Defense budget by category and appropriation title, in the traditional manner. The Service Secretaries and Chiefs will then present statements on their respective Services.

Upon completion of my statement, General Taylor, the Chairman of the Joint Chiefs of Staff, is prepared to present his analysis of the relative military postures of the United States and its Allies and the Sino-Soviet Bloc.

Again, because of the length of my statement, I would like to present it in sections, if agreeable to the Committee, holding myself available for questioning at the end of each section. The statement contains eleven sections, as shown in the Table of Contents. In addition, there is attached to each copy a set of related Tables which you may wish to follow as we proceed through the statement.

By and large, we have projected the forces and programs through fiscal year 1968, five years beyond the current fiscal year. As I pointed out last year, the further we project these programs the more provisional they should be considered. Changes will have to be made as we move along and entirely new projects, the need for which cannot now be clearly foreseen, will have to be added, as has been done this year.

We have also projected program costs through fiscal year 1968, but these cost projections are still highly tentative. Like all such projections, they suffer from what might be called a "bow wave" effect - a peaking of costs in the years following the budget year and a sharp tapering off in the later years. The peaking is principally the result of two factors: 1) the postponement to the next year of marginal and less urgent projects; and 2) the fact that the program costs beyond fiscal year 1964 have not been subjected to the detailed and rigorous budget reviews accorded the 1964

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estimates. Thus, we are continually pushing the peak of the program before us as we move from year to year; hence, the "bow wave" effect.

The downward slope in the later years of the 1964-68 period reflects our inability to see very clearly the course of future events. This is the typical downward bias inherent in all longer range projections, government or industry. We know, for example, that some of the projects included in the Research and Development program will advance to production and deployment before the end of fiscal year 1968, although we are not sure now which ones will be so advanced. When the decision to produce and deploy is made, the project is transferred to the appropriate mission-oriented program, i.e., Strategic Retaliatory Forces, Continental Air and Missile Defense Forces, General Purpose Forces or Airlift and Sealift Forces, and additional funds are added to procure and operate the system. Therefore, no precise conclusions as to the future course of the Defense program can be drawn simply on the basis of such cost projections. They are useful for internal Defense Department planning, but are in no sense predictions of future budgets.

I also want to remind you that I will be talking about costs in terms of "Total Obligational Authority". Total Obligational Authority represents the full cost of an annual increment of a program regardless of the year in which the funds are authorized, appropriated or expended. These costs will differ from New Obligational Authority in many cases, especially in the Procurement accounts where certain prior year funds are available to finance 1964 programs. Moreover, most of my discussion will deal with the total cost of a program, including the directly attributable costs of Military Personnel, Operation and Maintenance, as well as Research and Development and Military Construction. A reconciliation of the program costs with the budget titles and appropriation accounts for fiscal years 1963 and 1964 is shown on Tables 21 and 22.

Throughout this discussion I will try to call to your attention all major changes from the programs presented to you last year and give you the reasons for them. This will tend to lengthen my statement somewhat, but I believe you will want to know about these changes.

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## I. INTRODUCTION

### A. APPROACH TO THE FISCAL YEAR 1964-68 PROGRAM AND THE FISCAL YEAR 1964 BUDGET

This year, in contrast to last year when we had to develop a five-year program from the ground up, we started the budgeting cycle with an approved program projected through Fiscal Year 1967. This was essentially the same program I presented to the Committee last year. We realized, of course, that changes in this program would be needed as time went on, first, to reflect the action of the Congress on our fiscal year 1963 budget, and then to take account of all the numerous changes which are bound to occur in the international situation, in our requirements for military forces, in technology and in costs. Accordingly, we established last summer a program change procedure designed to provide an orderly method for proposing, reviewing and approving program changes. The procedure affords all elements in the Defense Department concerned with a particular proposal a full opportunity to present their views. For example, an Air Force proposal to modify its airlift fleet would be referred to the Army for comment as a user; to the Navy because of its impact on the sealift requirement; to the Joint Chiefs of Staff as representatives of the using commands, as well as to appropriate parts of my office. When all of these views have been assembled, Mr. Gilpatric or I review each proposal and render a decision or, in some cases, ask for further study. Where major issues are involved we discuss the matter in greater detail with our principal military and civilian advisors. Indeed, such major issues as the RS-70, NIKE-ZEUS, strategic forces, etc., were given individual and extensive study by the Chiefs, and their views were considered before the decisions were made.

The program change procedure went into effect last July and, up until the time the budget estimates were submitted in early October, several hundred program change proposals were received. These program changes would have added about \$40 billion to the previously approved 1964-67 program base. The sizeable sums requested were by no means unexpected, inasmuch as we had eliminated the arbitrary budget ceilings which had been used prior to 1961.

The program change procedure has unquestionably increased the workload on the Office of the Secretary of Defense, but I was particularly anxious that nothing should be done to discourage the Military Departments from submitting any program change they felt was necessary for the defense of the Nation. This was consistent with President Kennedy's instructions to me to: (1) develop the force structure necessary to meet our military requirements without regard to arbitrary budget ceilings, and (2) procure and operate this force at the lowest possible cost.

The total of the fiscal year 1964 programs and budgets submitted by the Services and Defense Agencies amounted to \$67 billion. All of

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the budgets were carefully reviewed jointly by the budget examiners of my office and the Bureau of the Budget, as has been the custom in the past. The analyses resulting from this review were forwarded to me for decision. In consultation with our principal advisors, Mr. Gilpatric and I then thoroughly reviewed all of the outstanding issues. Our decisions were transmitted to the respective Services and, in the final step of our review, outstanding differences were resolved. As a result of this review, we were able to reduce the approximately \$67 billion requested by the Services to the total of \$53.7 billion in new obligational authority recommended in the President's budget.

Admittedly, the President's budget does not include every program desired by the various elements of the Defense establishment. Many of the items deleted during the budget review, although important perhaps from the viewpoint of one Department, were redundant in terms of the Defense program as a whole. This type of overlapping of proposed programs is inherent in the way the Defense Department is organized, and it is not necessarily undesirable. It does assist in presenting to the top management of the Department of Defense a wider range of alternatives from which to choose, but it also requires some hard-headed decisions in the program and budget reviews in order to prevent uneconomical duplication of effort.

Then, there are a large number of desirable, though marginal or postponable, programs and activities which are always left to be screened out by the Secretary. Although this, too, increases the workload in my office, I believe we can adequately cope with it. We make this additional effort in order to ensure that every project or activity deemed important to our national security by any element of the Defense establishment is given consideration in the formulation of the over-all Defense program and budget.

In adding to a Defense budget as large as the one we now have, we begin to encounter the law of diminishing returns, where each additional increment of resources applied produces a smaller increment of overall defense capability. While the benefits to be gained from each additional increment cannot be measured with precision, careful cost-effectiveness analysis can greatly assist in eliminating those program proposals which clearly contribute little military worth in relation to the resource expenditures involved. We have applied this principle throughout our program and budget reviews.

Obviously, the value of another billion dollars spent for Defense also depends on changes in the world situation and the military effort undertaken by our antagonists. A large increase in the Soviet defense budget, for example, could substantially increase the value of an additional increment to our own Defense budget. A further tightening of tensions or belligerent actions against the United States or its allies might well increase the relative value of additional military effort. Our Communist



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opponents have greatly extended the range of conflict to cover virtually every aspect of human activity. And we, together with our allies, must carefully allocate our defense effort to ensure that we can meet the challenge on every front and at every level. An assessment of the present and prospective international situation and the military programs of our principal opponents is therefore highly pertinent to any discussion of the Defense program and budget.

**B. ASSESSMENT OF THE INTERNATIONAL SITUATION AS IT BEARS ON MILITARY POLICIES AND PROGRAMS**

Last year, when our attention was focused particularly on the Berlin crisis, I pointed out that the Defense program we were recommending was geared to our global requirements over the long-term, and not simply to the immediate situation as it then obtained. Since that time, the Nation and, indeed, the whole world has gone through another crisis, precipitated again by the Soviet Union, this time in Cuba. I believe it is clear from the actions taken by the President last October that the United States Government viewed with the greatest concern the sudden intrusion of Soviet offensive weapons in Cuba, only 90 miles from our own shores. However, as acute as this crisis was, and the after-effects have yet to be fully liquidated, it did not then and should not now distract our attention from the more fundamental and far-reaching challenge which Communism poses to the Free World. Without in any way minimizing the grave threat to our national security which would have been posed by Soviet nuclear armed ballistic missiles in Cuba, or, for that matter, the Soviet military presence in that country, those missiles represented but a small part of the total Communist threat to Freedom.

Even while the Soviet Union was attempting to extend its offensive military power directly into Cuba, the undeclared war against the Government of South Vietnam continued and a new overt military aggression was launched against India by the Chinese Communists. In Europe, Soviet pressure on the Allied position in Berlin continued unabated. In the Near East, the Communists were seeking to make inroads in the Arabian peninsula. In Africa, their efforts to exploit dissension and unrest in the Congo had been temporarily thwarted by the actions of the United Nations. All of these crises or probing actions are simply the more obvious manifestations of the Communist drive toward their basic objective of world domination.

This objective is held by both the Soviet Union and Communist China, but very distinct differences in tactics have become apparent. And, indeed, there is increasing evidence that the apparent monolithic structure of world Communism has been fractured, perhaps irreparably. There is emerging a bi-polarization of power in the Communist camp, the Chinese Communists trying to capture control of the Communist revolution and the Soviet Communists seeking to retain their present leadership.

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Although we may draw some comfort from this falling out between the Communist giants, the world situation remains perilous, nevertheless. The destruction of freedom and free nations is still the ultimate objective of both countries, but each is seeking to attain the objective in its own way, and to capture the spoils for itself.

Oddly enough, in this struggle for power in the Communist camp, the weaker of the two rivals is by far the more belligerent and the more reckless, and therefore, very dangerous to the peace of the world. The reason for this difference is not hard to find. The Soviet Union, after 45 years of unrelenting sacrifice and deprivation, is finally emerging from its status as a "have not" nation. Mainland China, however, after 13 years of Communist rule, has barely, if at all, made a start toward self-sufficiency. Her economic condition is desperate. The Soviet Union today has a great deal to lose in a nuclear war -- material wealth as well as human life. The economically impoverished Chinese Communists, to whom human life has little value, believe they have much less to lose. It is not surprising, therefore, that the Red Chinese are much more ready than the Soviet leadership to risk even nuclear war. And, indeed, the Chinese Communists have been quick to take the road of active belligerency in Korea, in Tibet and now in India.

But while war and the threat of war have rightly occupied most of our attention, we must not neglect the fact that the struggle with Communism is continuing through other means. As long as serious political and economic instability exists in any part of the world, the Communists will have an opportunity to enlarge the area of the struggle. Even now they continue to demonstrate their ability to take quick advantage of any breakdown of law and order in any part of the world and to identify themselves with any change in the status quo or with any emerging threat to existing authority.

In this regard, there has been no change in the policy of the Soviet Union to encourage what Mr. Khrushchev calls "wars of national liberation" or "popular revolts", and which we know as covert armed aggression, guerrilla warfare and subversion. And the Soviet Union has not diminished its efforts through the more subtle means of economic and military aid, political intrigue and propaganda to win over the neutral and emerging nations of the world to the cause of Communism. From Africa to the Near East, from Southeast Asia to Latin America, the pattern is the same. We may expect that the struggle in this area will intensify and we must be prepared to meet the challenge.

#### 1. Latin America

Although the Cuban crisis has greatly solidified the unity and cohesion of the American states, the threat of Communism has by no means abated, and a Communist government still rules in Cuba. Our forceful

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response to the threat of armed aggression from Cuba no doubt has diminished for the present the military aspect of the threat. But this simply means that Communist efforts will be shifted to other areas, and the Castroist Communist sabotage last fall in Venezuela is but one of the more violent examples of this danger. More important from the longer term point of view is the fundamental instability engendered by the widespread lack of adequate economic progress. So long as hunger and economic instability persist in Latin America, the danger of Communism will be ever present. Indeed, it is not an overt-armed Communist attack that is the real danger in this part of the world, or even Communist sabotage and subversion -- the real danger lies in the discouragement, disillusionment and despair of the people as a result of the relatively slow rate of economic and social progress.

Prior to fiscal year 1962, U.S. military assistance to Latin America was geared to a concept of hemispheric defense which envisaged the direct participation by Latin American forces in any large-scale conflict. A thorough review of the program convinced us that, except for specific cases where properly equipped naval and air forces could make a significant contribution to the solution of the anti-submarine warfare problem, this concept of hemispheric defense was becoming increasingly unrealistic. The main threat in Latin America today is that of Communist subversion and indirect attack, and not overt military aggression from outside the hemisphere. Accordingly, about one-half of the approximately \$75 million per year of military assistance which the United States is presently providing for Latin America is devoted to equipment and training for internal security purposes, with special emphasis on counterinsurgency training. The major portion of the balance is directed to the support of selected ASW forces. Although we fully recognize that the problem is essentially political and economic, the maintenance of law and order is an essential prerequisite to social and economic progress.

In addition to internal security, our program is also designed to contribute to economic and social development through what we call "civic action" projects. These projects, in such fields as agriculture, transportation, communications, health and sanitation, are beneficial to the people generally. Outstandingly successful programs of this sort have been conducted in Bolivia, Brazil, Chile, Columbia and Honduras. More recently we have instituted a similar program in Ecuador and we are currently developing projects for other Latin American countries, including El Salvador, Guatemala and Peru. Civic action projects are jointly funded by the Military Assistance Program and AID, with MAP providing the military equipment and related training.

But the Military Assistance Program will not in itself solve the problem of political instability which arises from the continued economic difficulties in much of Latin America, and herein lies the real danger of future Communist penetration. It was to meet this more fundamental problem

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that President Kennedy last year launched the Alliance for Progress which committed the United States to a long-term program of economic aid and technical assistance for our Latin American neighbors. This aid -- as explicitly provided in the Charter of Punta del Este -- was contingent on self-help and economic reform, which in our view are absolutely indispensable to future economic growth and social progress. Without these vital domestic measures, external assistance, no matter how large, cannot succeed in achieving the purpose for which intended.

Although the United States fulfilled its pledge at Punta del Este to provide \$1 billion of economic aid during the year which ended in March 1962, and is prepared to continue its assistance during the year ahead on the same general order of magnitude, progress has not been fully satisfactory. First, the level of self-help has not been sufficiently high, and second, the necessary conditions have not yet been created to encourage private investment, both domestic and foreign. Indeed, foreign private investment in Latin America has actually declined and the flight of private domestic capital has, in some cases, reached serious proportions. Yet, without substantial private investment, both domestic and foreign, the vast needs of Latin America will never be satisfied, since public funds on a scale anywhere near adequate to meet the requirement simply do not exist.

The United States Government has not hesitated to bring these shortcomings before the Inter-American Economic and Social Council, where we have urged that every possible measure be taken to create an environment attractive to foreign private investment, and to expand the role of private enterprise in the economies of Latin America. We are confident that further progress will be made in this direction, but the American people must be willing to continue to carry the burden of economic aid to Latin America for some time to come. This effort, seen in the context of the wider struggle between the Communists and the Free World, deserves a place of highest priority in our national security program. It is the most productive expenditure we can make to thwart the threat of Communism in that part of the world so important to our own security.

## 2. Africa

Africa is another area in which the Communists will try to take advantage of any political and economic instability. Although overt Communist military aggression against Africa is conceivable, it is not very probable because of the logistic difficulties involved. The real danger here is quite similar to that in Latin America, namely, that the Communists could gain a foothold by subverting and overthrowing an existing government. When we consider the large number of newly independent countries on that continent, the many opportunities for trouble-making become readily apparent. We and our Free World allies

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have the military power, both in kind and in quantity, to preclude an overt Communist military attack on any African country, but we do not have the means to prevent Communist infiltration, subversion and other forms of covert aggression. Our best hope to foreclose the extension of Communist influence in Africa, therefore, is to assist the new nations of that continent in their efforts to build viable societies. This we can do by giving them economic and technical assistance, and whatever military assistance is needed to ensure internal security. Here, again, we also hope to use the Military Assistance Program to support Civic Action projects in selected African nations.

We do not and need not carry the whole burden of helping to safeguard freedom in Africa. Other free nations, particularly the United Kingdom and France, also have interests and responsibilities in that part of the world, as does the United Nations. Our policy is not to supplant the assistance already being furnished by the metropole countries to their former colonies, but rather to supplement their programs where needed, and to help those countries where no other source of aid is available. Our Military Assistance Program for all of Africa amounts to only about \$35 million per year, two-thirds of which is for Ethiopia and Morocco. Our programs in tropical Africa are very modest and are directed at internal security.

More important from the longer term point of view are the economic and technical assistance programs. Here, again, we share this task with the other economically advanced nations of the Free World. But even with all the help that can be reasonably expected, the development of the African nations into modern viable societies will be a long, arduous and costly task.

### 3. Near East

In the Near East we face quite a different kind of situation. While most of the countries in this area are still politically unstable and economically underdeveloped, some are much further along in their efforts to modernize. Moreover, a number of them, Greece, Turkey and Iran, border on the Soviet Bloc and are thus directly exposed to Communist military power. To these three nations, we have made certain firm military commitments, and they have long been the recipients of U. S. military assistance in the area. Since Greece and Turkey are members of NATO and will be dealt with in that context, I shall omit them from this part of the discussion.

Although we provide some grant military aid to certain other Near Eastern countries, notably Jordan and Saudi Arabia, we do not share membership with these countries in any military regional organization. In general, our interest in this area is to help create an environment in which each of the nations can maintain internal stability and develop in its own way without fear of attack from its neighbors or from the Communist Bloc.

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This is a difficult and exacting role at best. It is particularly difficult where so many nations are divided, not only by the power struggles and rivalries of the moment, but also by mutual fears and suspicions whose origins are buried deep in history. This unsettled situation has been further complicated by the intervention of the Soviet Union in the area by giving military as well as economic aid to some of the nations in the hope of enhancing its influence. The massive Soviet military assistance given to the United Arab Republic, in particular, has gravely upset the balance of power in that part of the world, not only between that country and Israel, but also between it and the smaller Arab states. This development has made it necessary for the U.S. to furnish moderate amounts of military equipment and supplies to the other nations in the Near East. The U.S. Government has agreed, for example, to sell some HAWK anti-aircraft missiles to Israel to offset large Soviet deliveries of modern fighters and bombers to the UAR. Depending upon future Soviet arms shipments or other actions that tend to disturb the always precarious stability of the area, we may find it necessary to increase our military aid to still other Near Eastern States.

Iran, with whom we have a mutual cooperation agreement is one of the most vulnerable countries to Soviet encroachment, overt or covert. The U.S. has for many years been furnishing Iran with both economic and military assistance, and some progress has been made in strengthening both its economy and its defenses. But Iran borders directly on the Soviet Union, and even though the terrain favors the defense, we could not expect Iran to withstand alone for very long a major attack from its northern neighbor. The defense of Iran against such an attack could not be separated from the larger problem of the collective defense of the Free World.

However, while we cannot discount completely the possibility of an overt Soviet attack on Iran, the more likely contingency is a covert or ambiguous aggression, using dissident elements in Iran or neighboring nations to pave the way for ultimate Communist takeover. Accordingly, our military assistance objective in Iran is to help that nation build up its forces for internal security and to discourage minor incursions across its borders. Our economic aid program is designed to contribute to the general improvement of economic and social conditions which here, as elsewhere in the world, is the best defense against the spread of Communism. To this end, we are also assisting the Iranian armed forces with their own large civic action program.

#### 4. South Asia

The situation in South Asia is now reaching the critical point. After several years of nibbling at the northern borders of India, the Chinese Communists last October launched an attack in strength and seized large areas of Indian territory. This attack, considering its scope and character, obviously took many months to prepare and involved a

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staggering logistics effort. It also constituted a drain on an already greatly strained economy. Both of these factors, plus India's determination to defend its freedom and the Western determination to help her do so, give us grounds for confidence that this new Chinese Communist bid for expansion will also fail.

Although the United States has been furnishing large-scale military assistance to India's neighbor, Pakistan, since 1954 under a mutual defense agreement, the Government of India has until now not sought grant military aid. India has from time-to-time bought some military equipment from the U.S., but its major source of supply has been the United Kingdom. Last October, however, the Indian Government urgently requested aid from us and we quickly responded. A U.S. mission headed by Assistant Secretary of State Harriman (as well as a U.K. mission) made a rapid on-the-spot survey of the Indian situation and recommended that a limited military aid program be undertaken immediately. The recommendations of the Harriman mission were approved in principle by the President and a three-phase military aid program is now underway.

In the first phase, which is now virtually complete, we are providing materiel such as mortars, machine guns, ammunition, mines, communications equipment, and airlift support urgently needed by Indian forces immediately in the forward area. Some of this equipment was airlifted and the remainder is being sent by sea. \$60 million was allocated for Phase 1, with the Commonwealth nations providing a like amount of aid. The Indian Government has promised to repay the U.S. for this aid, including the cost of transportation, in local currency.

The second phase of this program will concentrate on a study of Indian defenses against air attack. The equipment, if any, to be provided in this phase will be determined after a detailed assessment of India's requirements. Such an assessment is now underway.

During the final phase, which will begin later this year, proposals for modernization and possible expansion of Indian armed forces will be considered.

The security and independence of India are matters of urgent concern to the entire Free World. We have already made massive investments in that country's economic development, both to benefit the Indians and to demonstrate to the people of all underdeveloped nations that there is a straighter and smoother road to economic and social progress than Communism. Now we must consider what is required to help defend the fruits of our mutual efforts.

One complicating factor in this situation is the deep-rooted antagonism still existing between India and Pakistan. The United States has taken great pains to assure the Government of Pakistan that our aid to India will

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not be at the expense of Pakistan's security to which we are committed under our mutual defense agreements. It is our belief that both India and Pakistan must now recognize that they face a common enemy to the north in Communist China, that from this recognition must come the impetus for resolution of their differences and that in the future their efforts must be directed against the real threat in Asia rather than dissipated against each other.

#### 5. Southeast Asia

In Southeast Asia the Communists have for the present foregone the use of open armed aggression in favor of the more covert techniques of subversion, insurgency and guerrilla warfare; in other words, what Mr. Khrushchev calls "popular revolts". Although the principal arena of the struggle at the moment is South Vietnam, it could easily spread to neighboring areas.

For example, the situation in Laos is still quite precarious. We have withdrawn our military advisors and training missions but we have as yet no assurance that the other side has done the same. Meanwhile, we are doing what we can to stabilize the situation by assisting the Government of Laos in meeting its financial responsibilities. We are under no illusions that stability has been established in that country or that the Communists have given up their aspirations for complete political control. However, we are taking political and economic measures and have extended certain military assistance within the framework of the Geneva Agreements to strengthen and maintain the non-Communist elements in Laos and their resistance against Communist threats to take over. Of course, we must remain alert and be prepared to take whatever measures may be necessary to safeguard the freedom of the neighboring countries, as we did last year when it appeared that the Communists might overrun Laos and invade Thailand.

In Vietnam we are continuing to support the Government in its undeclared war against the Communist guerrillas. In addition to large-scale economic and military assistance, we are also maintaining a very substantial training mission in that country. Including the Military Assistance Advisory Group, there is now a total of more than 11,000 U.S. military personnel in Vietnam, providing training, airlift, communications and advice to Vietnamese forces, and administering the Military Assistance Program.

As I have said before on several occasions, victory over the Viet Cong will most likely take many years. But now, as a result of the operations of the last year, there is a new feeling of confidence, not only on the part of the Government of South Vietnam but also among the populace, that victory is possible. Although there has probably been some increase in the strength of organized Viet Cong units, with greater confidence in the Government's ability to maintain law and order, support of the Viet Cong



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among the people appears to be declining. Viet Cong units are finding it increasingly difficult to gain recruits in the central highlands and to obtain food supplies from the local population. The Government's program of fortified or strategic hamlets has made a major contribution to the Viet Cong difficulties. In general, with better communications, better training and better equipment for the local defense forces, as well as for the central forces, the ability of the Government to cope with the guerrillas is improving.

We are not unmindful of the fact that the pressures on South Vietnam may well continue through infiltration via the Laos corridor. Nor are we unmindful of the possibility that the Communists, sensing defeat in their covert efforts, might resort to overt aggression from North Vietnam. Obviously, this latter contingency could require a greater direct participation by the United States. The survival of an independent government in South Vietnam is so important to the security of all of Southeast Asia and to the Free World that we must be prepared to take all necessary measures within our capability to prevent a Communist victory. However, short of such an overt attack, I believe the measures we are already taking in support of South Vietnam will eventually achieve their objective.

In this connection, we are both teaching and learning in South Vietnam. Personnel from all four of our Military Services are being rotated to South Vietnam, both to assist in the organization and training of the indigenous forces and to gain practical experience in counter guerrilla warfare. The experience that they bring back with them greatly enriches the training of other United States military personnel and assists in the development of new techniques and doctrine for counterinsurgency operations. In this way, we have considerably improved the training of the counterinsurgency units of the Army and the Air Force.

While there are no U.S. ground combat troops in other Southeast Asian countries at the present time, we are continuing to furnish military assistance, including training, to most of the free nations there. Thailand with its 1,000 mile frontier on Laos has assumed increased importance as a focal point for U.S. security efforts in Southeast Asia. We are now engaged in a major effort to assist the Government of Thailand in improving the capability of its military force to meet Communist infiltration and subversion, and in strengthening its internal military communications and logistic facilities. We do not expect that this military assistance will enable Thailand to withstand an all-out military attack by Communist China, but it should help them to maintain internal security and, in the event of a major aggression, provide at least an initial resistance until other Free World forces could be deployed to the defense.

Today, all of Southeast Asia is highly vulnerable to Communist aggression, both open and covert; this situation constitutes for the United States and the rest of the Free World a major threat for which we must provide in the design and deployment of our own military forces.

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## 6. Far East

The principal threat in the Far East, as well as in South and Southeast Asia, is Communist China, for the Soviet Union is unlikely to initiate a war in the Pacific alone. Although the situation in the Far East has remained fairly stable during the last year, the threat of aggression from Communist China has not abated. It may well be that the logistic effort involved in the Chinese Communist attack on India will detract from their ability to undertake military adventures elsewhere. But we know from experience that the pressure can be quickly shifted from India to Southeast Asia, Korea or Formosa, or even Japan or the Philippines, and we must continue to help guard all of these areas.

Our principal effort in the Far East is still in Korea where we maintain two divisions and are helping to support 18 Korean Army divisions and one Marine division. Korea is still the largest recipient of U.S. military assistance and is also the recipient of a very substantial amount of economic aid. Although the Korean Government is studying the possibility of reducing somewhat the size of its active army which inhibits the country's economic development, there seems to be little likelihood in the near future of being able to reduce significantly the economic and military assistance we must provide that country. Moreover, in the event of a renewed Communist attack on that country, Korea would need very substantial direct military help from the United States, and this too must be taken into account in calculating our own military force requirements.

We also have specific responsibilities to assist in the defense of our other friends and allies in the Far East -- the Philippines, the Republic of China, and Japan. By and large, our contribution to the joint defensive effort in the event of attack on one or more of these countries would be in the form of naval and air power which lie within the capability of our present and planned forces -- both active and reserve.

All in all, the relative strength of Free World countries in the Far East continues to improve. Japan is growing in economic and military strength. Although somewhat less dramatically, the Philippines are also progressing well. Considering the heavy burden of military requirements, the Republic of China has made notable advances. Nevertheless, the large standing forces maintained by the Republic of China continue to constitute a major drag on economic development.

## 7. NATO

I have deliberately deferred to the last the discussion of the NATO area. European NATO, with a population of more than a third of a billion and a GNP of well over \$350 billion a year, is still a principal bastion against the spread of Communism. The six Common Market nations, plus the United Kingdom, by themselves have a total population, a military

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manpower pool and a GNP well in excess of that of the Soviet Union. Moreover, the rate of economic growth of the Common Market nations compares very favorably with that of the Soviet Union and they have been able to provide their people with a much higher standard of living.

With the continued growth and extension of the Common Market, coupled with an increasing degree of political integration, in time there will inevitably develop in Europe a new power center, more nearly the equal of the Soviet Union and its European satellites. With the manpower, production capacity, and technical and scientific skills available to them, the nations of Europe should not only be able to provide larger contributions to their own defense but should also be in a position to contribute more to the defense of freedom in other parts of the world.

In view of this growing strength, some basic changes in our present arrangements with our NATO partners would be very much in order. We have no desire to dominate NATO. In fact, we would be very happy to share more equitably the heavy burdens we now carry in the collective defense of the Free World. But as long as we do carry so great a share of the total burden, we cannot escape carrying a proportionately large share of the responsibility for leadership and direction.

This is particularly true with regard to the strategic nuclear forces, the great bulk of which is provided by the United States for the defense of NATO. NATO is founded on the concept of collective defense. We have all agreed that an attack upon one would be considered an attack against all. Therefore, a decision to invoke the use of strategic nuclear weapons with their tremendous destructive potential and speed of delivery against another nuclear power would almost inevitably involve all the members of the Alliance in a global nuclear war.

Moreover, the targets against which such weapons would be used must, as a practical matter, be viewed as a single system. Because of the speed at which such an exchange would take place -- and as missiles become the predominant part of the strategic nuclear forces on both sides, the time would be reduced to minutes -- decisions must be made and executed promptly. Targets must be allocated to weapons in advance (of course, with options) and in a very carefully planned manner, taking into account the character of the targets, their urgency, importance and degree of hardness, as well as the character of the weapons, their range, yield, accuracy and speed.

Clearly, under these conditions, a partial and uncoordinated response could be fatal to the interests of all the members of NATO. That is why we have consistently stressed the importance of a single, integrated strategic nuclear force responsive to a single chain of command, to be employed in a fully integrated manner against what is truly an indivisible target system.

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The essential point here is not that this force must be under exclusive U.S. control but that we must avoid the fragmentation and compartmentalization of NATO's nuclear power, which could be dangerous to us all. If our European NATO partners wish to create a European strategic nuclear force, we certainly should have no objections. But we should insist that that force be closely integrated with our own so that it could be jointly targeted and directed in a coordinated fashion.

Furthermore, we are convinced that such a force could be successfully built only as a collective European undertaking and not on the basis of separate national efforts. We well know the heavy costs involved in creating and maintaining a strategic nuclear force. Our own nuclear forces cost us about \$15 billion a year, almost as much as all of our European allies, together, spend on their total defense programs. Even assuming a continued high rate of economic growth, it would take the combined resources of all of them to create a truly significant nuclear capability with which to face the Soviet threat. That is why I said last year at Ann Arbor that weak "national" nuclear forces operating independently would be very costly and of questionable effectiveness.

The United States does not oppose a nuclear capability for our NATO partners. In fact, we have for many years been providing them with tactical nuclear capable weapon systems, although the nuclear warheads are retained, in accordance with our laws, under U.S. control. We have provided training in the use of these weapons to a large number of allied military personnel. We are making every possible effort to keep our NATO partners fully informed of the problems of nuclear war and the measures we are taking to deal with them. And last year we announced that we had earmarked a fully operational POLARIS force to the NATO Command.

It was in this same spirit of mutual confidence and support that we recently entered into a new series of agreements on nuclear armaments with the United Kingdom at Nassau. The immediate issue between the two governments in this area arose from our judgment that the SKYBOLT air-to-ground missile should not be developed and procured for our own strategic forces, for reasons which I will discuss later in connection with the Strategic Retaliatory Forces Program. This judgment created a major problem for the U.K., which had planned to buy 100 of these missiles to equip their VULCAN bombers in order to extend the useful life of these aircraft through the 1960's.

In 1960, the United States entered into an agreement with the U.K. to make available, under certain conditions, SKYBOLT missiles if we proceeded with production. We undertook to bear the entire cost of the SKYBOLT development. The British undertook to bear the costs of adapting the missile to their bombers and their warheads. The entire agreement was contingent upon the successful development of the missile and its use by the United States. In the event that we found it undesirable to complete the program, the British would have the right to continue further development at their own expense.

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The President, wishing to assist the U.K. in every possible way to adjust to our cancellation of SKYBOLT, explored with the British Prime Minister at Nassau a number of possible alternatives. As one alternative, the President offered to continue the development of SKYBOLT as a joint enterprise with the U.K. with each country bearing equal shares of the future cost to complete development, after which the U.K. would be able to place a production order to meet its requirements. This offer went considerably beyond the original agreement, under which the U.K. would have had to stand the full cost of further development, but the British Prime Minister decided not to accept it in the light of the uncertainties involved in the project.

Another alternative suggested by the President was the use of the HOUND DOG missile, but because of the technical difficulties involved in adapting this missile to the British V bombers, the Prime Minister declined this suggestion also.

A third alternative considered was the sale of POLARIS missiles to the U.K., with that country furnishing its own submarines and warheads. This was the alternative suggested and favored by the U.K. Both the Prime Minister and the President recognized that such an arrangement could not only meet the needs of the U.K. but could also open up entirely new opportunities for enhancing the unity and cohesion of the NATO Alliance by making possible the creation of a truly multi-lateral NATO nuclear force. The United States will not only sell to the United Kingdom the POLARIS missiles and associated equipment but will also provide technical assistance and such other support as may be later agreed upon. The ballistic missile submarines constructed under the agreement will be assigned as part of a NATO nuclear force and targeted in accordance with NATO plans. The U.S., on its part, will assign at least equal forces to the NATO Command. And, except where supreme national interests are at stake, these forces will be used solely for purposes of international defense of the Western Alliance.

To make a start in the development of a multi-lateral NATO nuclear force, it was agreed that some part of the U.S. and U.K. nuclear forces already in existence could be assigned to NATO and targeted in accordance with NATO plans, including allocations from U.S. strategic forces, from the U.K. Bomber Command, and from tactical nuclear forces now held in Europe.

The President also decided that the United States should invite France, the only other NATO nuclear power, to participate in this multi-lateral force on terms similar to those offered the United Kingdom, although implementation of the agreement between the U.S. and the U.K. is not contingent on French participation. It is also contemplated that other NATO nations will be invited to participate in such a force, although the specific method of participation has not been decided upon.

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Although we are still much too close to the event to view it in historic perspective, I believe that time will show the Nassau Pact to be a major milestone in the long march to a truly interdependent Atlantic Alliance, the goal proclaimed by President Kennedy at Philadelphia last July 4th. We hope that all our European partners will view this opportunity in the same light and join with us in making it a reality.

But the creation of a multi-lateral NATO nuclear force will not lessen the need for sizeable conventional forces in Europe, and this fact was clearly recognized at Nassau. The possibility that we may have to fight non-nuclear wars in Southeast Asia, the Middle East and other areas of the world is accepted, generally, without argument, but not so with regard to Europe. For some unaccountable reason many people believe that any military action in Europe, short of a very minor probe, would require the immediate use of nuclear weapons, and I stress the word "immediate". Certainly, a massive attack on Western Europe would have to be met with whatever weapons are required to counter it. That has always been the policy of the Western Alliance. And, I have repeatedly stated before this Committee that "even in limited war situations we should not preclude the use of tactical nuclear weapons."

However, we may well be faced with situations in Europe where it would not be to the advantage of ourselves or our Allies to use even tactical nuclear weapons initially -- provided we had the capability to deal with them through non-nuclear means. Nuclear weapons, even in the lower kiloton ranges, are extremely destructive devices and hardly the preferred weapons to defend such heavily populated areas as Europe. Furthermore, while it does not necessarily follow that the use of tactical nuclear weapons must inevitably escalate into global nuclear war, it does present a very definite threshold, beyond which we enter a vast unknown.

This does not mean that the NATO forces can or should do without tactical nuclear weapons. On the contrary, we must continue to strengthen and modernize our tactical nuclear capabilities to deal with an attack where the opponent employs such weapons first, or any attack by conventional forces which puts Europe in danger of being overrun. We mean to defend Europe with every kind of weapon needed.

But we must also substantially increase our non-nuclear capabilities to foreclose to our opponent the freedom of action he would otherwise have, or believe he would have, in lesser military provocations. We must be in a position to confront him at any level of provocation with an appropriate military response. The decision to employ tactical nuclear weapons should not be forced upon us simply because we have no other way to cope with a particular situation. The NATO powers have all the resources, the talents and the skills needed to match our opponent at any level of effort in Europe. I will discuss this point in greater detail in context with our plans for the General Purpose Forces.

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The most critical problem at issue between East and West in Europe continues to be the fate of Berlin. Our sharp confrontation of the Soviets in the Caribbean no doubt upset their agenda for Berlin. Their stationing of nuclear armed ballistic missiles in Cuba was directly related to that agenda. The psychological if not the military threat that these missiles would have posed to our own homeland was apparently the trump card which Mr. Khrushchev intended to play in the next round of negotiations on the status of Berlin.

The set-back dealt Soviet plans in Cuba may have postponed an incipient crisis in Berlin, but did not remove the latent danger in that area. East Germany is still in dire straits, both economically and politically. The freedom and prosperity of West Berlin still stand in stark contrast to the oppression and misery behind the wall. Notwithstanding the wall, the barbed wire and the bullets of the VOPO's, East Berliners still almost daily take the desperate gamble of trying to and sometimes succeeding in escaping to freedom. Although from our point of view, the obvious solution would be to improve the political, social, and economic conditions in East Berlin and for that matter in all of East Germany, the Communists instead still hope to solve the dilemma by obliterating freedom in West Berlin.

This we cannot permit. The United States, England, and France as the occupying powers, have a legal and moral responsibility to the two million people in West Berlin. We cannot abdicate that responsibility without casting grave doubts on our determination and ability to defend freedom in Europe, or -- for that matter -- anywhere else in the world. Thus, Berlin has become for us and our Allies the test of our resolve to forestall any further encroachment of Communism upon the Free World.

#### C. STRENGTHS AND WEAKNESSES OF THE COMMUNIST BLOC

It is apparent from this brief survey of the international situation that in the years ahead the Communists will have many opportunities to create, if they so choose, new crises in virtually every corner of the globe. Quarrels and armed conflicts will arise both between nations and within nations without any help or instigation from international Communism. But we can be sure that the aspirants for bloc leadership will not hesitate to exploit these difficulties for their own ends. Indeed, the very keenness of this competition has tended to increase their aggressiveness. While Communist China purports to favor violence and armed revolt in extending the sway of Communism, the Soviet Union prefers to achieve the same ends by more subtle means, resorting to force and violence only where they see opportunities for the use of force without undue risk. In either case, their efforts must be thwarted.

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## 1. The Soviet Union

Although Communist China is the more reckless and belligerent of the two, the Soviet Union has by far the greater capability to cause us injury or otherwise damage the interests of the Free World. There is no gainsaying that Soviet resources, industry and technology have given that country the potential to challenge the primacy of U.S. military power in the world. While the size, variety, and power of our strategic retaliatory forces still greatly exceed those of the Soviets, the Kremlin leaders have at their command the resources, production capacity, and technology to produce strong forces of their own. We believe they will continue to make great efforts to do so. The Soviet Union can also be expected to maintain large and well-equipped conventional forces to ensure the internal security of the Soviet Union, to control its European satellites, to secure its Eastern frontiers and to threaten Western Europe.

In addition, we cannot preclude the possibility that the Soviet Union might seek to establish a direct military presence in other parts of the world, as they did in Cuba. But we believe that they are well aware of the dangers inherent in a direct confrontation between U.S. and Soviet military power in these areas where we hold a distinct military advantage. Accordingly, we may anticipate that the Soviet Union will concentrate primarily on other means to extend its influence in these areas, including opportunistic political support, economic aid and military assistance to nonaligned countries, and covert assistance to dissident elements in countries allied with the Western powers.

But the resources and capabilities of the Soviet Union are by no means unlimited. The stresses and strains of their efforts to catch up with the United States are becoming increasingly apparent.

We can also expect that the Soviet Union will want to maintain its great effort in space and astronautics, both for its value as a symbol of scientific and technological excellence and for its potential applications in peace or war. In addition, the Soviets have made great promises to their people forecasting a Communist society of economic plenty. To keep this promise and to impress on the rest of the world, particularly the less economically developed countries, that Communism is the surest road to progress, the Soviet leadership will have to provide for the continued growth of the civilian sector of their economy as well. The rate of Soviet industrial growth, which averaged a little more than 10 percent annually during the first half of the 1950's and nearly 9 percent during the second half of that decade, is now down to about 7 percent. While it is true that the gradual introduction of a shorter work week contributed significantly to this slowdown during the 1950's, the more recent decline in the growth rate must be attributed in great measure to the increasing demands of the military and space programs for specialized, scarce, high-grade resources -- scientists, engineers, highly-trained technicians and high quality materials and computers.

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This decline in the rate of growth of Soviet industry, coupled with increases in defense and space expenditures, has been accompanied by a sharp drop in the rate of increase of new investment. Over-all investment increased only about 4 percent in 1961 compared with year-to-year rises of 8 percent in 1960 and 13 percent in 1959. Almost all sectors of the economy were affected but the consumer industries fared the worst, decreasing 10 percent below 1960.

The latest available information indicates that Soviet military expenditures since 1958 have increased by about one-third, from an estimated 13.7 billion new rubles in 1958 to about 18.1 billion rubles in 1962. It is estimated that the Soviets plan to increase their defense expenditures in 1963 by about one billion rubles. Roughly half of this increase is related to the production and deployment of advanced weapon systems (exclusive of RDT&E) -- which in turn, has required extensive new investment in plant and equipment over the last several years. At the same time, the Soviet Union has continued to maintain large military forces. The reductions in military manpower announced in January 1960 have apparently been abandoned, and the total active duty strength of Soviet military forces today, about 3.25 million, is not much less than it was three years ago.

These additional defense costs can be supported only at the expense of increases in other sectors of the economy, including not only new investment but also what is termed in the Soviet budget "social-cultural measures". This is the category of the budget which includes funds for education, health and social welfare, and a large part of the Soviet research and development program. The increase planned in this category for 1962 was less than the average annual increase of past years.

The strain on the Soviet economy is also being demonstrated in other ways. Last June, Mr. Khrushchev announced a drastic increase in the price of meat and butter in order to bring demand for these items back into better balance with the short supply. This action was felt so keenly by the Soviet people that it led to riots in some cities. In October, the Soviet Government announced the cancellation of a scheduled income tax cut, part of a 1960 promise to eliminate income taxes by 1965. The Soviet people were told that this indefinite postponement of future tax cuts resulted from the need for increased defense expenditures. These taxes on personal income bring in almost 6 billion rubles a year to the Soviet treasury, about 7 percent of the total revenues. In still another restrictive move, the Soviet Government announced the curtailment of private construction which, particularly in the rural areas, has been a very important source of new housing. This action is a clear reflection of the cut-back in investments in "construction and construction materials." Finally, the failure of Soviet agriculture to meet its production goals in recent years has been attributed by many experts not only to the fact that collectivized agriculture can never be as efficient as free enterprise

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farming, but also to the lack of adequate investment -- a lack illustrated, for example, by the low use of chemical fertilizers.

It is apparent that the lower growth rates of the past two years are related to the rising demands of their military and space programs. These programs will continue to exert great pressure on Soviet resource availabilities during the next few years. Conversely, the slower rates of economic growth, the demands of the civilian economy, the requirements of their foreign aid program etc., will act as restraints on further additions to the military and space programs, particularly on large and very costly new programs such as an effective anti-ballistic missile defense system.

In other words, the Soviet leadership is confronted with a very severe resources allocation problem and must strike a balance among its various objectives: military; space; foreign aid; civilian housing; agriculture and improvement of the standard of living of the Soviet people; etc. The Soviets could, over the next few years, build a large force of hardened second generation ICBM's; they could develop and deploy an ICBM delivery system for the large yield nuclear warheads they have been testing since 1961; they could expand and improve their MRBM/IRBM systems; they could continue to maintain and improve their active defenses against manned bomber attack; they could maintain a large and modernly-equipped army; they could develop and deploy some sort of a system of active defense against ballistic missile attack; they could modernize and improve their large fleet of submarines including ballistic missile-firing types; they could continue the space race; they could expand both military and economic aid to the non-aligned nations; they could make the great investment needed to create an efficient agricultural economy; they could continue to push the development of heavy industry; or they could increase the standard of living of the Soviet people -- but they cannot do them all at the same time.

There is evidence that the increasing military burden on the economy has led to debate within the Soviet leadership during the last two years. We can expect that the pressures on the Kremlin leaders will be intensified over the next few years, as we continue to move forward with our own military and space programs and as the economic and military strength of the Free World continues to grow.

Although we cannot predict with any degree of precision how the Soviet leadership will solve its resources allocation problem, it may be that the strain of so many competing claims on the Soviet economy will tend to limit the size and help determine the character of the Soviet military program, at least over the next few years.

## 2. Communist China

Notwithstanding the attack on India, the economic prospects of the Communist Chinese are extremely bleak and will, at least during the next few years, serve to limit the size and character of their military adventures. Mainland China is essentially an agricultural economy, and when agriculture suffers, the entire economy suffers. The disastrous consequences of Communist China's agricultural policies are now clear for all to see. The masters of Peiping are having difficulty feeding their people, even at a bare subsistence level, and have had to resort to very large-scale procurements of foodstuffs from abroad. The Soviet Union is unable -- and probably unwilling, as well -- to make up the shortfall in China's agricultural output, thereby forcing China to use its limited exchange reserves to buy food from the Free World.

The calamitous collapse of Chinese agriculture has forced a sharp curtailment of industrial production; first, because China's industrial production is heavily dependent on agriculture for raw materials and, second, because additional workers have had to be transferred from industry to help revive the faltering farm program. Moreover, the failure of agriculture will retard the future growth of mainland China's industry because traditional agricultural exports will not have earned the foreign exchange to pay for the import of capital goods and, in fact, their foreign exchange reserves have been significantly depleted by food purchases from abroad. This past year, Mainland China's agriculture appears to have picked up a bit. However, at best it will be a limiting factor in the Chinese Communist leaders' calculations for some time. China's economic problems have been further intensified by the withdrawal of Soviet aid and technical assistance, leaving many industrial development projects incomplete, and by the sharp cut back in Chinese Communist imports from the Soviet Bloc.

Communist China's economic difficulties and the strain of the recent campaign against India should tend to limit her ability to engage in large-scale aggression against other of her neighbors, particularly where such aggression might involve a direct confrontation with U.S. military forces. We cannot preclude a broadening of the attack on India. But a large-scale overt attack elsewhere in South East Asia, or against Formosa or South Korea, is not very likely under present circumstances. However, an intensification of lesser efforts to cause trouble for the Free World should be anticipated, particularly in terms of psychological warfare and political intrigue. And we have no reason to doubt that Communist China will continue to fuel the guerrilla war in South Vietnam, at least at the present scale, or support the position of the Communist elements in Laos.

To sum up, the Soviet Union will most likely pursue a strategy in which their military forces are designed to permit the Soviet Union to:

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- a. Confront us with continuing political pressure, subversion, and various forms of unconventional warfare under the umbrella of their growing nuclear power.
- b. Capitalize on their conventional military power by the threat of bringing it to bear in situations where they have local conventional superiority.
- c. Deter the West from military action, particularly from the initiation of a first strike with nuclear forces.

Communist China will most likely follow an independent policy designed to expand its own influence in the Communist Camp and among the unaligned nations, resorting to armed aggression to satisfy its territorial ambitions where this can be done without a direct confrontation of U.S. military forces.

The size and character of the military effort of both countries will be tempered by the pressures of other demands on their available resources. This factor should be kept in mind as we discuss the adequacy of our own military program.

#### D. IMPACT OF THE DEFENSE PROGRAM ON THE ECONOMY

A program as large as Defense, commanding 10 percent of our total national output, is bound to have an important impact on the economy, internationally, nationally and locally. And, indeed, at the local level this impact is usually intensified by the uneven geographic distribution of defense-related industry and our own military activities, by the disproportionately large claims made by the defense program on some occupational categories and on certain sectors of industry, and by the rapidly changing composition of the defense program as technological innovations create the need for new weapons and facilities and obsolete the old.

##### 1. Defense Contracting

We are aware that the award of new Defense contracts and the establishment of new Defense facilities in a particular area can make the difference between prosperity and depression. The law requires the Defense Department to give certain limited preferences to chronically depressed and surplus labor market areas and to assure an equitable participation by small business firms. But the law explicitly forbids "the payment of a price differential on contracts . . . for the purpose of relieving economic dislocations."

And this is as it should be. The Defense Department's policy now, as in the past, is to procure what we need when we need it at the lowest cost to the Government, quality and delivery schedules considered. We

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will, however, make every effort to assist small business and firms in surplus labor market areas to participate in Defense work by keeping them informed of opportunities for Defense contracts, by encouraging our prime contractors to increase sub-contracting to small business and by helping them to understand Defense procurement policies and procedures, and finally by using fully the "set aside" provisions of the law.

We will also continue our efforts together with other departments and agencies of the Government to alleviate economic hardships caused by unavoidable shifts in Defense procurement and the closing of Defense installations.

## 2. Balance of Payments

A problem which has been giving us increasing concern during the last few years has been the unfavorable balance in our international payments. During the 1958-1960 period, total U.S. expenditures abroad (i.e., imports, overseas defense expenditures, foreign investments, etc.) exceeded total U.S. earnings (i.e., exports, income from our foreign investments, sale of services, etc.) by an average of \$3.7 billion per year. Although the size of the deficit was reduced last year, it was still on the order of \$2.0 billion.

Such a continuing deficit would concern us in any event since it is usually the symptom of a fundamental economic imbalance. But there is a second reason for our concern. For a long time, particularly since the end of World War II, the dollar has been a world currency, held by many Free World countries as backing for their own money. Their willingness to hold dollar balances is directly related to the convertibility of the dollar into gold upon demand. To the extent that our payments deficit results in a continued outflow of gold from our reserves, the position of the dollar as a fully convertible world currency is imperiled.

In 1960, potential claims held by foreign countries against U.S. gold in the form of short term dollar balances rose above the \$18 billion mark, and for the first time exceeded our total gold supply. As of last September, the net deficit between our gold stocks and potential foreign dollar claims had risen to \$4.9 billion. While this does not indicate any immediate danger to the position of the dollar, continuation of a sizeable deficit for several more years could greatly damage international confidence in our currency.

National security expenditures overseas represent a significant percentage of recent deficits in our balance of payments. In recent years, net U.S. defense expenditures entering the balance of payments have averaged \$2.6 billion per year. Through economies in our own expenditures, and by arranging with our allies for their purchase of additional American equipment and services, we reduced that figure to

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about \$2.0 billion for 1962, and it is our objective to bring it below the billion-dollar mark by 1966.

During the past year and a half, several measures aimed at reducing defense overseas expenditures and increasing receipts have been instituted. The most significant of these in dollar value has been the agreement with the Federal Republic of Germany to offset U.S. dollar outlays by increasing its military procurement in the U.S. and its use of American supply lines, depots, and maintenance and support facilities. A "partial offset" agreement has been negotiated with Italy and others are being sought with Japan and France for increased procurement of U.S. military equipment and services.

Let me touch briefly upon a few of the other actions we have undertaken to reduce overseas defense expenditures.

1. A voluntary savings program for reduction of individual expenditures has now been in effect for nearly two years. Military and civilian personnel and their dependents have been urged to reduce their personal expenditures overseas and to channel their family spending and savings to U.S. sources. The success of this voluntary program is indicated by a 9 percent increase in the number of overseas military personnel purchasing savings bonds through payroll deductions and a 31 percent decrease in parcel post shipments from APO's -- evidence of a reduction in purchases of foreign-made products for shipment home.
2. Procurement of goods abroad for use by our military forces overseas, is being replaced by procurement in the U.S. when it is estimated that the cost of U.S. supplies and services (including transportation and handling costs) will not exceed the cost of foreign supplies and services by more than 50 percent. In calendar year 1961, using a 25 percent differential, approximately \$71.4 million of procurement contracts which otherwise would have been placed abroad were placed in the U.S., and for calendar year 1962 we expect to raise this total to upwards of \$100 million.
3. Pursuant to the Foreign Assistance Act of 1961, we have issued instructions which limit the use of military assistance funds for offshore procurement to only certain very restricted purposes. During fiscal year 1962, MAP/OSP expenditures were reduced by about \$30 million below the previous year's level.
4. In addition to these measures, we have undertaken a comprehensive review of the requirements for each of our foreign military bases and installations, and we have placed underway

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more than sixty specific projects and actions for reducing the unfavorable impact of Defense transactions entering the international balance of payments. During my budget review last fall, moreover, each proposed program was judged not only from a budgetary point of view, but also in light of its foreign exchange implications.

E. ARMS CONTROL AND DISARMAMENT

Although the balance of my statement will be concerned with the specific measures we are proposing to increase our military strength and enhance our security, we should not lose sight of the fact that the central objective of our national policy is, in President Kennedy's words, a peaceful world community of free and independent states, free to choose their own future and their own system as long as it does not threaten the freedom of others.

As the events of last October have so forcefully demonstrated, the expanding arsenals of nuclear weapons on both sides of the Iron Curtain have created an extremely dangerous situation not only for their possessors but also for the entire world. As the arms race continues and the weapons multiply and become more swift and deadly, the possibility of a global catastrophe, either by miscalculation or design, becomes ever more real.

More armaments, whether offensive or defensive, cannot solve this dilemma. We are approaching an era when it will become increasingly improbable that either side could destroy a sufficiently large portion of the other's strategic nuclear force, either by surprise or otherwise, to preclude a devastating retaliatory blow. This may result in mutual deterrence but it is still a grim prospect. It underscores the need for a renewed effort to find some way, if not to eliminate these deadly weapons completely, then at least to slow down or halt their further accumulation, and to create institutional arrangements which would reduce the need for either side to resort to their immediate use in moments of acute international tension. The United States and the Soviet Union, as the two great nuclear powers, are the nations most directly endangered by these weapons and therefore have a great mutual interest in seeing to it that they are never used. But until we can find a safe and sure road to disarmament, we must continue to build our own defenses.

I would now like to turn to the specifics of the program proposed for the coming fiscal year and planned through fiscal year 1968.

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## II. STRATEGIC RETALIATORY FORCES

The Strategic Retaliatory Forces are designed to carry out the long-range strategic mission and to carry the main burden of battle in general nuclear war. They include the long-range bombers, the air-to-ground and decoy missiles and refueling tankers; the land-based and submarine-based strategic missiles; and the systems for their command and control. They do not include certain other U.S. nuclear forces capable of reaching targets deep inside the Communist bloc - namely, the deployed tactical air units and carrier-based attack aircraft. Although the targeting of these forces is coordinated with that of the Strategic Retaliatory Forces, they are not taken into account in computing the requirements for the latter. The reason for this is that they are primarily intended for other purposes. Thus, with respect to the strategic mission, they represent an additional or "bonus" capability.

### A. THE REQUIREMENT

The major mission of the Strategic Retaliatory Forces is to deter war by their capability to destroy the enemy's war-making potential, including not only his nuclear strike forces and military installations, but also his urban society, if necessary. Last year I described to this Committee the steps involved in determining the numbers and types of weapon delivery systems required to carry out this mission under various sets of conditions. Briefly, they take into account the character of the target systems; the numbers and yields of weapons required to destroy that system; the kinds of forces best suited to deliver these weapons, i.e., their payloads, penetration abilities, CEP's, reliability and vulnerability and cost/effectiveness, as well as the size and character of the enemy's strategic offensive forces.

Obviously, each of these factors involves various degrees of uncertainty for which allowances must be made in our analyses. One of the major uncertainties is, of course, the size and character of our opponent's strategic forces and defensive systems -- now, and more importantly, in the future. Because of the long leadtimes involved in making these weapon systems operational, we must plan for our forces well in advance of the time when we will need them and, indeed, we now project our programs at least five years ahead of the current budget year. For the same reason we must also project our estimates of the enemy's forces at least five years into the future, and for some purposes, even beyond. These longer range projections of enemy capabilities are, of course, highly conjectural, particularly since they deal with a period beyond the production and deployment leadtimes of enemy weapon systems. Therefore, we are, in effect, attempting to anticipate production and deployment decisions which our opponents, themselves, may not yet have made. This fact should be borne in mind as we discuss the intelligence estimates and our own programs based on them.

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By and large, the estimates of Soviet strategic forces projected for mid-1967 in the latest National Intelligence Estimate (NIE) are of the same order of magnitude as those we used last year in developing our five year Strategic Retaliatory Forces Program. With regard to the ICBM's, the latest projections of the totals are somewhat lower, [REDACTED] compared [REDACTED]. There is a decrease in the number of "semi-hard" missiles, [REDACTED] instead of [REDACTED], and an increase in the number of "soft" missiles, [REDACTED] instead of [REDACTED]. The estimates for the "hard" missiles are about the same.

Again, as was the case a year ago, [REDACTED]

[REDACTED] In our analyses we have used the high end of the range of the latest National Intelligence Estimates as the median case, and the [REDACTED] estimate as the "high" case. These figures were then extrapolated through mid-1968 allowing for a further increase in the number of fully hardened Soviet ICBM's [REDACTED]

A significant change in the new estimates has been for Soviet missile launching submarines. Last year it was estimated that the Soviets would have [REDACTED] missile launching submarines, with [REDACTED] by mid-1966. It is now estimated that the Soviet Union could have as many as [REDACTED] submarines with [REDACTED] by mid-1966 and [REDACTED] submarines with [REDACTED] by mid-1967, including both "ballistic" and "cruise" types. More than half of these submarines are expected to be nuclear-powered but the ballistic missiles are expected to be of considerably shorter range than even our A-1 POLARIS missiles.

The estimate for Soviet IREM's has also been increased for mid-1967 from about [REDACTED] to between [REDACTED] in the latest NIE, and some of these missiles are apparently being installed in hardened sites. We have used the same estimates for mid-1968.

The estimates for Soviet medium and heavy bombers and tankers for mid-1967 are not much different than they were last year. We have projected about the same number for mid-1968.

With regard to the defensive forces, we estimate that the Soviet Union will continue to deploy in large numbers its second generation surface-to-air missile which is similar to the U.S. NIKE-HERCULES. We estimate that the Soviet Union will have also deployed a HAWK-type system by the 1966-1968 period.

The Soviet Union is also known to be working on an active defense against ballistic missiles. There are apparently two separate systems, one designed primarily against shorter range ballistic missiles - under 1,000 nautical miles - and the other against all types of strategic ballistic missiles. [REDACTED]

[REDACTED]

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## B. PRESENT U.S. STRATEGIC RETALIATORY CAPABILITIES

Last year I told this Committee "there is no question but that, today, our Strategic Retaliatory Forces are fully capable of destroying the Soviet target system, even after absorbing an initial surprise attack." This statement is still true. We have a total of about 650 manned bombers on 15-minute ground alert and over 200 operational ATLAS, TITAN, and MINUTEMAN missiles on launchers and about 144 POLARIS missiles in submarines. [REDACTED]

And this capability is rapidly expanding as additional MINUTEMAN and POLARIS enter our operational inventory.

Allowing for losses from an initial enemy attack and attrition enroute to target, we calculate that our forces today could still destroy the Soviet Union without any help from the deployed tactical air units or carrier task forces or THOR or JUPITER IRBM's.

## C. FUTURE STRATEGIC RETALIATORY FORCES

In my statement a year ago, I pointed out that "as the Soviet Union hardens and disperses its ICBM force and acquires a significant number of missile launching submarines (as we must assume that they will do in the period under discussion) our problem will be further complicated." There is increasing evidence that this is the course the Soviet Union is following. Thus, it is even more important today than it was last year that we concentrate our efforts on the kind of strategic offensive forces which will be able to ride out an all-out attack by nuclear-armed ICBM's or submarine-launched missiles in sufficient strength to strike back decisively.

A very large increase in the number of fully hard Soviet ICBM's and nuclear-powered ballistic missile-launching submarines would considerably detract from our ability to destroy completely the Soviet strategic nuclear forces [REDACTED]

We do not anticipate that either the United States or the Soviet Union will acquire that capability in the foreseeable future. Moreover, to minimize damage to the United States, such a force would also have to be accompanied by an extensive missile defense system and a much more elaborate civil defense program than has thus far been contemplated. Even then we could not

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preclude casualties counted in the tens of millions.

The most likely possibility is that we would have to strike back after absorbing the first blow. This means we have to build and maintain a second strike force. Such a force should have sufficient flexibility to permit a choice of strategies, particularly an ability to: (1) Strike back decisively at the entire Soviet target system simultaneously or (2) Strike back first at the Soviet bomber bases, missile sites and other military installations associated with their long-range nuclear forces to reduce the power of any follow-on attack -- and then if necessary, strike back at the Soviet urban and industrial complex in a controlled and deliberate way.

Now the foregoing is not to say that we can forecast the nature of a nuclear attack upon the United States. In talking about global nuclear war, the Soviet leaders always say that they would strike at the entire complex of our military power including government and production centers, meaning our cities. If they were to do so, we would, of course, have no alternative but to retaliate in kind. But we have no way of knowing whether they would actually do so. It would certainly be in their interest as well as ours to try to limit the terrible consequences of a nuclear exchange. By building into our forces a flexible capability, we at least eliminate the prospect that we could strike back in only one way, namely, against the entire Soviet target system including their cities. Such a prospect would give the Soviet Union no incentive to withhold attack against our cities in a first strike. We want to give them a better alternative. Whether they would accept it in the crisis of a global nuclear war, no one can say. Considering what is at stake, we believe it is worth the additional effort on our part to have this option.

In planning our second strike force, we have provided, throughout the period under consideration, a capability to destroy virtually all of the "soft" and "semi-hard" military targets in the Soviet Union and a large number of their fully hardened missile sites, with an additional capability in the form of a protected force to be employed or held in reserve for use against urban and industrial areas.

We have not found it feasible, at this time, to provide a capability for ensuring the destruction of any very large portion of the fully hard ICBM sites or missile launching submarines. Fully hard ICBM sites can be destroyed but only at great cost in terms of the numbers of offensive weapons required to dig them out. Furthermore, in a second strike situation we would be attacking, for the most part, empty sites from which the missiles had already been fired.

The value of trying to provide a capability to destroy a very high proportion of Soviet hard ICBM sites becomes even more questionable in view of the expected increase in the Soviet missile launching submarine force. Our ability to destroy these submarines before they fire their missiles will be limited once the Soviet Union places any large number of

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them on station. Neither do we have any significant ability to intercept the missiles once they have been launched from a submarine. And, I might point out, neither does the Soviet Union.

Although we are investing very large sums in research and development in the ASW and anti-ballistic missile areas, it is not very likely that our efforts will produce enough of an increase in our capabilities during the period under consideration to change the prospects significantly.

With these objectives and limitations in mind, I would like to discuss the strategic retaliatory forces proposed through fiscal year 1968.

#### 1. The Future of Manned Strategic Aircraft

I know that this committee is concerned over the question of the future of manned strategic aircraft. As I promised last year, we have made a most detailed and exhaustive review of the entire problem of the future role of these systems. I would like to review some of the recent history of this issue and to report to you on our findings at this time.

##### a. B-52 Procurement

The first bomber procurement issue I faced was the question of whether or not to procure another wing of B-52's in 1961. At that time, we had a force of some 1,500 intercontinental bombers, soft based and concentrated on about 60 bases. We had very few ICBM's, and those that we did have were also soft and concentrated. By mid-1961, as you will recall, we had 5 POLARIS submarines operational; a very small force. The most urgent problem at that time, and the problem was urgent, was to acquire rapidly a large force of protected nuclear firepower that could not be knocked out in a surprise missile attack.

The 60 bomber bases, and two-thirds of the bombers on them, could have been knocked out by a small force of perhaps as few as 180 ballistic missiles. MINUTEMAN, on the other hand, is hard and dispersed. An attacker would have to use several of his missiles in order to knock out one MINUTEMAN, with reasonably high confidence. And POLARIS missiles in submarines at sea cannot be targeted by ballistic missiles at all. Therefore, we decided to concentrate our procurement dollars on the accelerated production of MINUTEMAN and POLARIS. This decision did not mean that we did not want to have any manned bombers. We already had many bombers and very few ballistic missiles. Our intent was to achieve a balanced mixed force of bombers and missiles. To do that we had to buy missiles.

**b. The RS-70**

The next issue I had to face was the development of the B-70, or the RS-70 as it was later called. The issue here was not the future of manned strategic aircraft in general. Rather, it was whether this particular aircraft, in either of its configurations, could add enough to our already programmed capabilities to make it worth its very high cost.

Many of the arguments that have been advanced in support of the RS-70 actually support the case for post attack reconnaissance in combination with an improved ICBM force. We believe that there are more promising ways of performing this mission than the RS-70, when both cost and effectiveness are considered. Other than this, the RS-70 is said to have two distinct capabilities: (1) trans-attack reconnaissance; that is, reconnaissance during our missile attack, and (2) the ability to examine targets and attack them on the spot with strike missiles, if required. Quite apart from the technical feasibility of developing, producing and deploying such a system within the time frame proposed by the Air Force (which we do not think possible), there are better ways, when one considers both cost and effectiveness, to obtain both of these capabilities.



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The principal advantage of having a reconnaissance and a "strike" capability in an aircraft is one of timeliness. That is, it may be possible to process and interpret enough of the "recon" data rapidly enough so that effective strikes can be made immediately with air-to-surface missiles. To do this the target still must be within range of these missiles when the data has been interpreted to the extent that a "strike" can be ordered. If this can be done "effectively" there is the advantage of being able to deal with the target quickly. That is, the target can be attacked within a few minutes after being reconnoitered compared to times approaching an hour (or more) if "strike" is to be accomplished by some other weapon system. Quick attack is not always important. But to the extent that it can be accomplished, and it is important, having a "strike" capability in the aircraft is an advantage. What do we buy if the "strike" missile is in the aircraft?

A tactic of post-attack reconnaissance and subsequent strike -- subsequent "strike" by either air-to-surface missiles or ICBM's -- has the following possible applications:

- (1) Initial attack of fixed targets whose location is not known precisely.
- (2) "Mop-up" operations against fixed targets of known location that have been programmed for initial attack by ballistic missiles. (What is not known here, for certain, is whether or not the target has been destroyed.)

You will note that initial attack of targets whose precise location is known and attack of mobile targets were not included in the above list. Initial attack of targets of known location can be accomplished effectively with ICBM's. These targets could also be attacked, initially, by air-to-surface missiles from an RS-70. But ICBM's have the important advantages of shorter time-to-target, lower cost, and high survival potential. The particular advantage of the RS-70 against these targets would be its ability to "mop-up" after an initial missile attack. Attack of mobile targets simply cannot be accomplished with an RS-70 and, in fact, the Air Force does not propose such a role for the RS-70.



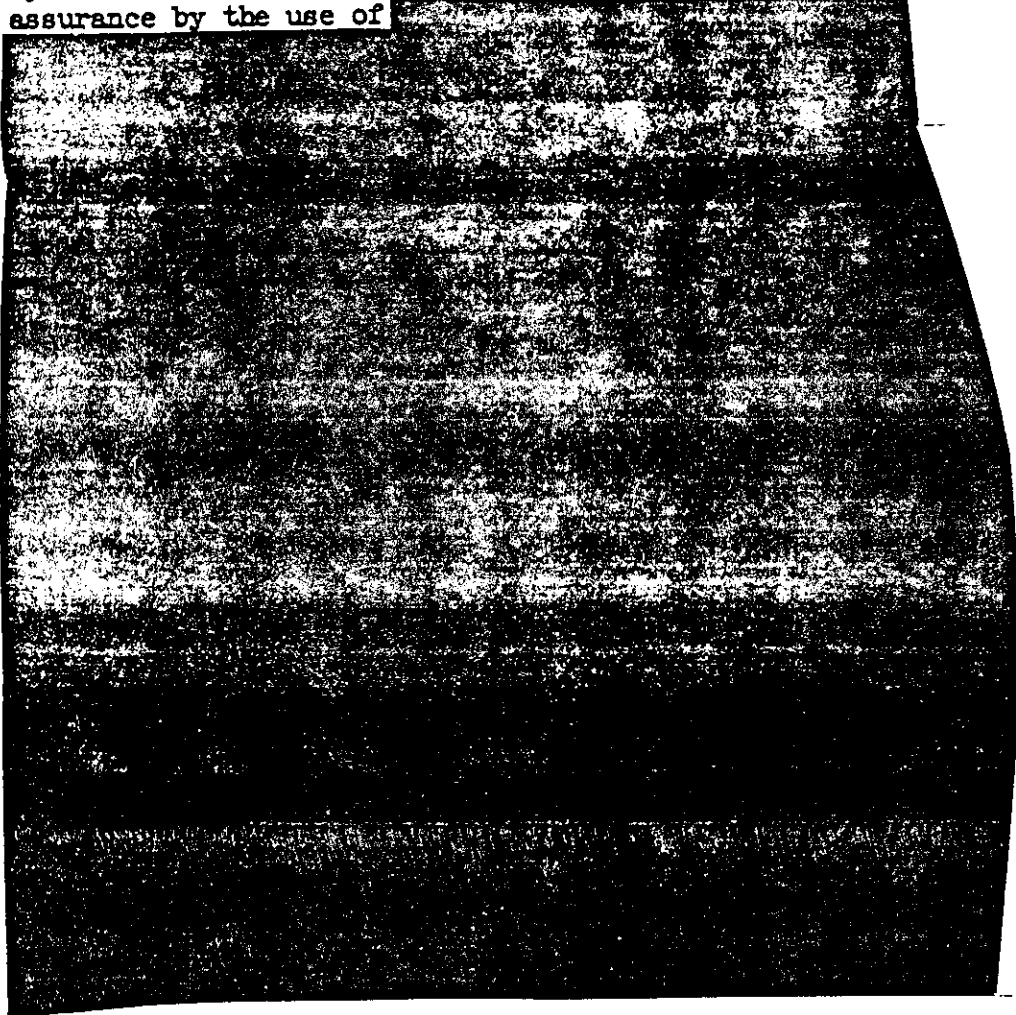
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How much do we really gain by being able to attack the above two types of targets with air-to-surface missiles as distinct from attacking them with ICBM's?

- (1) Initial attack of fixed targets whose location is not known precisely: 

Generally, if a target can be identified as being somewhere in a small area, its exact location can eventually be established. Moreover, these targets can be attacked by ICBM's after post-attack reconnaissance.

- (2) "Mop-up" operations against fixed targets that have been attacked previously by ICBM's : The probability as to whether the target has been destroyed by the initial missile attack can be inferred with some assurance by the use of 
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In summary, it is clear that we should have the capability to do post-attack reconnaissance, but we will have other means to do that. The issue is whether we need an aircraft which includes a capability for "strike" (air-to-surface) missiles, realizing that we can also lay on further ICBM attacks if dictated by results of reconnaissance. So it is not a question of whether or not the attack will be accomplished.

As I have indicated before, I am sure that the cost to complete the RS-70 program would be at least \$10 billion in addition to the \$1.35 billion already approved. It might be considerably more. Yet only a very small increase in over-all effectiveness is achieved by having a "strike" capability in an aircraft. In my judgment, this increase is not worth the large additional outlay of funds required to accomplish it.

Accordingly, we propose to complete the presently approved \$1.3 billion B-70 development program of three aircraft and, in addition, continue the development of selected sensor components using, in the current fiscal year, \$50 million of the extra \$192 million provided by the Congress last year for the RS-70 program. Of the balance, \$81 million is to be applied to fiscal year 1964 and the remaining \$61 million is to be held in reserve for the B-70. The Air Force has not yet completed its analysis of the effect on development costs of the 3-month delay already encountered in the flight testing of the first B-70.

#### c. SKYBOLT

The final issue to do with the future of manned bombers is the cancellation of SKYBOLT. There are two possible reasons why the cancellation of this ballistic missile program might raise an issue about the future of the manned bomber.

The first possible reason is that SKYBOLT apparently provided a job for the B-52 to do. That is, even if the B-52 were to have trouble penetrating enemy defenses, it could stand off and fire SKYBOLT missiles. This would be a sort of "POLARIS-of-the-Air." Viewed in this way, it was clear that SKYBOLT could not make a worthwhile contribution to our strategic force mix. It would combine the disadvantages of the bomber with those of the missile. That is, it would have the bomber's disadvantages of being soft and concentrated and relatively vulnerable on the ground and the bomber's slow time to target. But it would not have



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the bomber's advantageous payload and accuracy, nor would it have the advantages associated with a manned system. It would have the lower payload and poorer accuracy of the missile -- indeed, it would have had the lowest accuracy, reliability and yield of any of our strategic missiles -- without the relative invulnerability and low time to target of a MINUTEMAN or a POLARIS.

These characteristics make SKYBOLT unsuited to either category of primary strategic targets. On the one hand, SKYBOLT is not a good weapon system for targeting against Soviet strategic airbases, missile sites and other high priority military targets because it would take hours to reach its target. Why use a SKYBOLT to hit a Soviet bomber base eight hours after we have decided to go to war when we can do it more reliably in 30 minutes with a MINUTEMAN? On the other hand, SKYBOLT is not a good weapon for attacking cities. Leaving aside its relative vulnerability to anti-ballistic missile defenses, it has the important disadvantage that it must be committed to its target, if at all, early in the war because it would be vulnerable on the ground. Common sense requires that we not let ourselves be inflexibly "locked-in" on such a matter. And "being locked-in" is unnecessary when we have systems like POLARIS that can be withheld for days, if desired, and used at times and against targets chosen by the President.

It is, therefore, not at all surprising that the Air Force does not attempt to justify SKYBOLT as a weapon for attacking primary targets.

What is the value of SKYBOLT then? The only remaining important target category is defense suppression, that is, the destruction of the enemy's defenses in order to permit the bombers to penetrate. But SKYBOLT does not have a unique capability here. There are several other missiles that also can be used to attack defenses: MINUTEMAN and HOUND DOG in particular. SKYBOLT only offered a special advantage in this role as long as it was expected to be significantly cheaper than alternative systems. Unfortunately, this advantage has disappeared.

The cost history of SKYBOLT is one of unusually bad management. Although originally estimated to be less, the Air Force estimated early in 1960 that SKYBOLT would cost \$214 million to develop and \$679 million to procure. By early 1961, the estimated development cost had increased to \$391 million. By December 1961, the estimated development costs had risen to \$492.6 million and the procurement costs to \$1,424 million. In its July 1962 program submission, the Air Force increased the estimated procurement cost to \$1,771 million. This would mean a total cost to develop and procure, exclusive of warheads, of \$2,263.6 million. This is the latest Air Force estimate.

In fact, there are compelling reasons for believing that these estimates are still very unrealistic, and that the actual costs would

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be much higher. For example, the SKYBOLT development program was far behind schedule on the program that was supposed to be completed for \$492.6 million. According to that program, there were supposed to be 28 test flights by the end of 1962. In fact, there were six. Moreover, the amount of flight time allowed in that program was less than half the amount that was actually required for HOUND DOG. Yet HOUND DOG was a much less complex development.

Just how much more would have been required to complete SKYBOLT is uncertain. I am sure that to complete the development and engineering test program would ultimately have to cost at least \$600 million. It might have been substantially greater. As for procurement, it is difficult to see how the costs could be less than \$2 billion. Thus, the SKYBOLT was very likely to become nearly a \$3 billion program, not counting the \$600 million extra cost for warheads. And at that, we had no assurance that it would end in a reliable and accurate missile.

In effect, this meant that SKYBOLT had lost its cost advantage. The Air Force plan called for a force of 1,012 missiles, of which 704 would have been mounted on alert bombers. Therefore, the cost per alert missile -- and that is the most realistic way to count it -- would approximate \$4 million per missile, and would be very close to the incremental initial investment cost for extra MINUTEMAN missiles complete with blast resistant silos. In view of the greater flexibility, i.e., effectiveness against all kinds of targets, reliability, accuracy, and much lower vulnerability and time to target, it clearly makes sense to meet our extra missile requirements by buying MINUTEMAN rather than SKYBOLT.

We propose, then, that to the extent ballistic missiles are required for defense suppression, they be MINUTEMAN.

One final question remains. Is the missile program I am recommending adequate to do the job of defense suppression? I can assure you that it is.

[REDACTED]

Finally, it should be emphasized that we are doing many other things also to help our bombers to penetrate enemy defenses. We have equipped the B-52's with jamming equipment and with air-launched QUAIL decoy missiles to confuse the defenses. Moreover, we are also overhauling all of the B-52F and G models, and most of the H models to strengthen their wings for low altitude flying. Nearly \$315 million for a wide range of measures to enhance the over-all effectiveness of the B-52 fleet was included in the 1963 budget, and about \$210 million is included in the 1964 budget request.

Lest there be any impression to the contrary, the cancellation of SKYBOLT has had no effect whatsoever on our plans for retention of the B-52 fleet. However, it will result in a net saving, after providing for the 100 extra MINUTEMAN, of about \$2 billion.

## 2. Bomber Forces

As you can see from Table 2, we plan to continue a mixed force of missiles and manned bombers throughout the entire planning period -- 1964-1968. Although most of the aiming points in the Soviet target system can be best attacked by missiles, the long-range bombers will still be useful in follow-up attack, particularly on certain hardened targets.

Accordingly we plan to maintain at least through fiscal year 1968 all 14 of the B-52 wings comprising 630 operational aircraft. Advance attrition aircraft have been procured with prior year funds to support this force. The B-47 subsonic medium bombers will be completely phased out of the forces by the end of fiscal year 1966 on the same schedule I presented last year. We still have about 700 B-47's in the force. Some of these aircraft could be continued in operation for a longer period of time than now planned if the need should arise over the next year or two. The B-58 supersonic medium bombers, of which two wings totaling 80 operational aircraft are now in the force, will also be retained at least through our five-year planning period. Attrition rates on this aircraft have been higher than we had estimated earlier and there will, therefore, be some decline in the operational inventory. Thus, by the end of fiscal year 1968 we now plan to have 72 B-58's in the force.

In summary, by the end of fiscal year 1968 we would still have a total of about 700 operational bombers in the force.

Since July 1961 we have maintained approximately 50 percent of the manned bomber force on a 15-minute ground alert. Because this measure is essential to the survival of the force in a ballistic missile attack, we plan to continue it throughout the program period. But I should caution that a 15-minute ground alert may not be sufficient to safeguard the bomber force -- particularly during the later part of this decade. By that

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time the Soviet Union could have a large number of missile-firing submarines on station within reach of most of our bomber bases.

[REDACTED]

The increasing missile threat underscores both the importance of maintaining our on-the-shelf airborne alert capability and the value of the special provisions contained in Section 512b of the Fiscal Year 1963 Defense Appropriation Act. This is the section which authorizes the Secretary of Defense, upon determination by the President that such action is necessary, to provide for the cost of an airborne alert as an excepted expense. This provision should be retained in the law.

Although we are planning to continue the present limited airborne alert program of 12 training sorties per day (plus maintaining an on-the-shelf capability to fly one-eighth of the force for one year), we must always be ready to increase promptly the scale of this operation. Indeed, during the early phases of the Cuban crisis last year, we did just that. We may be able to finance the additional cost of that action from our current year's appropriations, in which case we may not have to resort to Section 512b this year; provided, of course, that no new crisis again forces us to expand our airborne alert operations.

### 3. ICBM and POLARIS Forces

By and large, the strategic missile forces we are proposing for the fiscal year 1964-1968 period are in line with those presented last year, with two major exceptions which I will discuss.

#### a. ATLAS

There has been no change in the ATLAS program during the last year and all 13 ATLAS squadrons, aggregating 126 operational missiles on launchers, are now in place. No change has been made in the decision to start phasing out some of the "soft" ATLAS beginning in fiscal year 1966. We plan to phase out an additional 12 of these missiles in fiscal year 1968, reducing the forces from 126 at end 1965 to 99 at end 1968. Again, we will for some time retain the option to phase them out either more slowly or more quickly as future circumstances may warrant.

#### b. TITAN

The TITAN force shown in Table 2 is essentially the same as that presented to the Committee last year. All six squadrons of TITAN I, aggregating 54 missiles, are now in place. There has, however, been some slippage in TITAN II and by the end of the current fiscal year we now estimate we will have 77, excluding the training and test launchers.

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We expect all 12 squadrons of TITAN, aggregating 108 missiles on launchers, to be in place by the end of the current calendar year, and we plan to continue this force throughout the programmed period.

c. MINUTEMAN

A total of 800 MINUTEMAN missiles have been programmed through fiscal year 1963. These should all be in place by the end of fiscal year 1965. The program is on schedule. The first 30 operational missiles are already in place, and the first 3 squadrons totaling 150 missiles should be operational by the end of the current fiscal year. However, the Air Force informed me very late in our review of the 1964 budget that a cost increase of as much as \$400 million on the first 800 MINUTEMAN missiles may develop. We have not as yet had sufficient time to examine the reasons for this possible increase, or the alternatives open to us in dealing with it. I have asked the Air Force to make a detailed study of this problem and when the results are available I will inform the Committee.

Last year I indicated that we were contemplating a MINUTEMAN force of about 1,200 missiles to be in place by the end of fiscal year 1968. This force has now been increased to 1,300 by the same date, in order to offset the cancellation of the SKYBOLT. But more important is a tentative decision to introduce a new improved MINUTEMAN beginning with the 1964 program. These are shown on a separate line in Table 2. The first 150 improved MINUTEMAN missiles could be in place by the end of fiscal year 1966, with the force building up to 500 operational missiles by end 1968.

It is estimated that the improved MINUTEMAN could have approximately twice the yield and one-half the CEP of the earlier model, plus provisions for multiple targeting, and remote launching and trajectory prediction systems. The increase in the yield and accuracy could enhance the effectiveness of the MINUTEMAN against Soviet hard missile sites. With information from the trajectory prediction systems, additional missiles could be directed against those targets which had escaped destruction in the first salvo. The capability to launch missiles from remote locations such as an airborne command post would help ensure that the use of our otherwise undamaged missiles held in reserve would not be lost to us because of the destruction of their ground control centers or their communications.

We have included \$190 million of RDT&E funds in the 1964 budget for the development of the improved MINUTEMAN missiles.

d. POLARIS

The POLARIS program shown in Table 2 is about the same as that presented to the Committee last year. Thirty-five POLARIS submarines were fully funded through fiscal year 1963 and the long lead-time equipment for six additional ships was provided for. The last six of the planned fleet of 41 submarines are fully funded with the provision of \$695 million in the fiscal year 1964 budget.

[REDACTED]

Nine POLARIS submarines carrying 144 missiles are now deployed at sea. Nine more submarines with 144 missiles will become deployable during fiscal year 1964 and the entire force totaling 41 submarines and 656 missiles will be deployable by the end of fiscal year 1967.

The first 5 POLARIS submarines are equipped with the 1,200 nautical mile A-1 missile. We had also planned to equip the sixth submarine with the A-1 missile but we have since found it possible to equip it with the A-2 missile which has an effective range of 1,500 nautical miles. Similarly, the 19th was to be equipped with the A-2 missile but we now plan to outfit it with the 2,500 nautical mile A-3. Thus, the 6th through the 18th submarine will be equipped with the A-2 missile and the 19th through the 41st will be equipped with the A-3. As previously planned, all of the earlier submarines will eventually be equipped with the A-3 missile, although the missile tubes of the first 5 will have to be replaced to accommodate the larger missile. This work is scheduled to start at about the end of fiscal year 1964.

The presently planned POLARIS force will require a supporting fleet of six tenders, six resupply ships, and a number of floating drydocks and other support ships. A total force of six tenders has been programmed in in order to ensure that at least five of the six will be available for continuous deployment to support the five squadrons into which the POLARIS force will be organized. Four tenders and three supply ships were funded through fiscal year 1963. The 1964 program contains \$69.6 million for the fifth tender and \$8.5 million for the conversion of another resupply ship. The balance of the requirement will be brought into the force in phase with the deployment of the submarines. This program, except for the one change -- the addition of the tender -- is the same as presented last year.

A year ago, funds were requested to begin construction of the West Coast POLARIS logistics support and training complex to permit deployment in the Pacific in fiscal year 1965. The complex includes a missile facility at Bangor, Washington, a training facility at Pearl Harbor, an overhaul facility at Puget Sound and a POLARIS tender anchorage at Guam.

e. Penetration Aids

It was apparent to us two years ago that the Soviet Union would make a great effort to develop an anti-ballistic missile defense system. Accordingly, we more than doubled the amount included in the 1962 budget, from the original \$15 million to an amended amount of \$35 million, for the development of devices and techniques to ensure that our strategic missiles would continue to be able to penetrate any defense our opponent was likely to develop and deploy during the next five or six years. Last year we further increased the 1962 budget for this purpose and requested almost a quarter of a billion dollars for fiscal year 1963. This year we are requesting over \$300 million in our fiscal year 1964 budget, to continue work on penetration aids and new re-entry systems.

[REDACTED]

While we are still not sure whether the Soviet Union will decide to make the tremendous investment required for an anti-ballistic missile defense system, even if limited to their principal cities, we believe that they have the technical knowledge and production "know-how" needed to produce and deploy a system of the NIKE-ZEUS type by about 1965-1966. It is, therefore, of extreme importance that our strategic missiles, and particularly those to be targeted against cities, be equipped with penetration aids by that time period.

A great deal of progress has been made during the last two years in the study of this problem, but much more remains to be learned about the physical effects which accompany the re-entry of ballistic missile warheads into the atmosphere and the various methods which might be used to simulate these effects. There are a large number of different techniques which might be used as penetration aids --

[REDACTED]

As we learn more about anti-ballistic missile defense and re-entry phenomena, further improvements may be expected in our penetration aids. But this is a costly research program requiring much sophisticated instrumentation at the test ranges. Accordingly, we have made every effort to take maximum advantage of the related work being done in connection with our own anti-ballistic missile defense R&D efforts, particularly the NIKE-ZEUS and DEFENDER projects. Obviously, the problems of the offense are the converse of those of the defense and the information obtained from our penetration aids research has greatly influenced our thinking on the anti-ballistic missile defense problem which I will discuss in the next section of my statement.

#### 4. Other Strategic Retaliatory Force Programs

Shown in the next to the last block of Table 2 are a number of other systems supporting the Strategic Retaliatory Forces.

##### a. QUAIL

This program is the same as presented last year. Fourteen B-52 squadrons are now equipped with 28 QUAIL decoy missiles each.

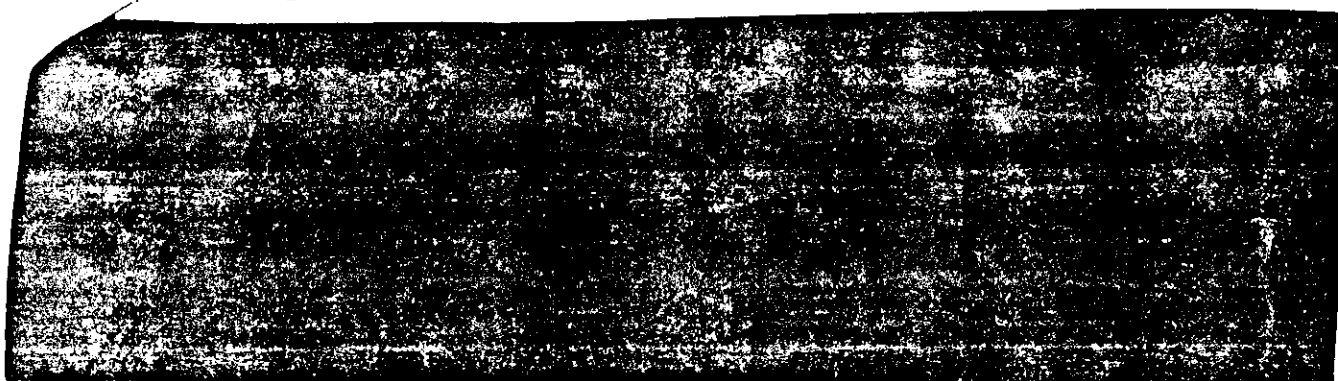
b. Tankers

Last year the figures presented for the KC-135 tankers included a number of aircraft for the National Emergency Airborne Command Post (NEACP) and the Post Attack Command and Control System (PACCS). This year we have excluded these aircraft from the tanker category, with the cost of the NEACP aircraft transferred to the General Support Program and the PACCS carried in the Command and Control element of this program.

We have programmed for the 1965-68 period a force of 620 KC-135's to support the B-52's and the B-58's, and when required, the fighter aircraft of the Tactical Air Command. Together with command support, attrition requirements, etc., we will need to buy a total of 732 KC-135 tankers. We have already funded 719 through fiscal year 1963 and the balance of 13 aircraft (at \$33 million) is included in the fiscal year 1964 budget request.

The KC-97's will be phased out by fiscal year 1966 as previously planned.

c. Strategic Reconnaissance Aircraft



d. REGULUS

We now have five operational REGULUS submarines with a total of 17 missiles aboard and, as I pointed out last year, we plan to start phasing them out of the force during fiscal year 1965. By that time, the contribution that these few REGULUS missiles will be able to make to our rapidly growing total strategic retaliatory capability will be quite marginal, especially when weighed against either the cost of continued operation of the submarines in this role or their use for other purposes.

D. COMMAND AND CONTROL

Achievement of our over-all national objectives requires that our Strategic Retaliatory Forces be kept continuously under the control of the constituted authorities, from the President on down to the commanders of the forces - before, during and after a nuclear attack. We now have a



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World-Wide Military Command and Control System (WWMCCS) in being or in the process of implementation, both on the national level and within our military forces. The National Military Command System, which is part of the world-wide system, provides intelligence and communications for the high level command as well as a number of alternative locations for the President or others in the national chain of command, including widely separated and protected land sites, dispersed command ships, and aircraft that can remain airborne for extended periods of time. Other portions of the world-wide system are included in "General Support" which I shall cover later in my statement. At this point I would like to discuss the command and control system of the Strategic Air Command which is included in the Strategic Retaliatory Forces program.

The Strategic Air Command and Control System which I described last year, together with certain basic improvements which are planned, should be adequate for the Command and Control mission in peacetime and in the pre-strike phase of a nuclear war. The improved pre-strike system is expected to achieve an operational capability by September of this year and to be fully operational by the beginning of calendar year 1965. The total augmentation cost of SACCS is estimated at about \$350 million. About \$295 million has been funded in the 1963 and prior year programs and about \$40 million is included in the 1964 budget. Some additional funds will be required in the fiscal year 1965 budget. Its annual operating cost is estimated at about \$50 million.

But because this system is only partially hardened and thus vulnerable to enemy ICBM's, we cannot count on it functioning after an initial nuclear attack. Therefore, alternative systems must be provided for the post-attack phase.

Last year we began the development and procurement of the airborne element of the Post Attack Command and Control System (PACCS). This airborne element consists of 17 specially equipped KC-135 command post aircraft, and 36 B-47's equipped as communications relay aircraft. Twelve of the command post aircraft, one of which is continuously airborne, and all of the communications relay aircraft are already in operation. All 17 command post aircraft will be in operation by the end of the current fiscal year. These aircraft will be replaced with KC-135 aircraft ordered with fiscal year 1962 and 1963 funds. The total investment cost of the airborne system is estimated at about \$300 million, plus about \$60 million for research and development. Its annual operating cost is estimated at \$30 million.

I informed the Committee last year that we were studying the construction of a deep underground support center. The airborne command post and relay aircraft should be able to survive the initial attack and their ability to communicate with all elements of the strategic forces is good. However, they have limited unrefueled endurance and it is possible that tankers may not be available to keep them airborne.

[REDACTED]

Moreover, there are limits to the number of personnel which could be carried and the amount of detailed re-planning that could be accomplished in an airplane. :ed

The deep underground support center, on the other hand, would have long endurance in a post-attack environment and would have adequate space for the necessary personnel, communications, computer equipment, etc. It is not a substitute for the airborne element, however, [REDACTED]

[REDACTED]

We are proposing, therefore, to initiate the construction of a deep underground support center in fiscal year 1964. This facility would become operational during the 1967-69 period, with an interim capability by 1965. Its total cost is now estimated at \$155 million, of which \$31 million is included in the 1964 budget to complete the first phase. In addition, about \$3 million of 1963 funds is being re-programmed to begin development of the necessary electronics and communications equipment.

#### E. NEW STRATEGIC MISSILE SYSTEMS

In addition to the improved MINUTEMAN which I described earlier, we also have in the R&D program a number of other strategic missile projects -- for example, studies and exploratory development of an advanced ICBM which was initiated this year and of advanced sea-based deterrent systems on which we have been working since fiscal year 1961. We are also studying the possibility of an improved version of the A-3 POLARIS and are doing a great deal of work on improved propulsion, structures, guidance, etc., for land-based missiles, all of which will contribute to the improvement of existing missiles or new advanced missiles. Funds are also included in the R&D programs for exploratory work on low altitude penetration vehicle systems, as contrasted to missile systems whose vehicles follow a ballistic path. Also, the Mobile Medium Range Ballistic Missile system (MMRB) is being developed for possible application in Europe or elsewhere in the world within reach of Communist Bloc targets.

Together, all of these projects, which I shall discuss in greater detail later, provide for the development of a broad base of technology for future strategic retaliatory weapons systems. One or more may actually reach the production and deployment stage before the end of the programmed period, fiscal year 1968, but until a decision is made to produce and deploy these systems, they are shown only in the R&D program. This classification of development projects should be kept in mind in connection with the military forces and programs shown for the years furthest in the future since it contributes to a downward bias in the figures shown for that period.

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F. ADEQUACY OF THE PROPOSED FORCES

The Strategic Retaliatory Forces programmed through 1968 are, in our judgment, fully adequate to accomplish the objectives which I discussed earlier.

[REDACTED] a rapidly increasing portion of this force will consist of hardened and dispersed ICBM's and submarine-based POLARIS missiles, all with a very high probability of survival under nuclear attack. The offensive power of these weapons will be further enhanced by the addition of penetration aids and the availability of larger yield warheads. Further increases in the large forces already programmed would provide only marginal increases in capabilities in relation to their additional cost.

Obviously, these judgments are based on our present estimates of the probable make-up of Soviet forces during the program period. For the more distant years, these estimates are, of course, quite tentative since they rest on certain assumptions regarding decisions which the Soviet leadership has not yet had to make. Nevertheless, our presently planned program retains for us sufficient flexibility to make changes in time to meet any Soviet program shift. We have ample manufacturing capacity for POLARIS and MINUTEMAN, both of which will be in production for some years to come. If more are needed in future years, we should be able to procure them in time.

G. FINANCIAL SUMMARY

The Strategic Retaliatory Forces I have outlined will require Total Obligational Authority of \$7.3 billion for fiscal year 1964 compared with \$8.5 billion for fiscal year 1963, \$9.1 billion for fiscal year 1962, and \$7.6 billion in the original budget estimate for fiscal year 1962.

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### III. CONTINENTAL AIR AND MISSILE DEFENSE FORCES

The Continental Air and Missile Defense Forces include those weapon systems, warning and communications networks and ancillary equipment required to detect, identify, track and destroy unfriendly forces approaching the North American continent. Obviously, the requirements for these defensive forces are closely related to the provisions we make for the Strategic Retaliatory Forces, since the latter, in carrying out their own mission, would greatly reduce the weight of an enemy follow-on attack upon the United States. So too, the requirements for defensive forces are closely related to the size and character of our Civil Defense effort, which in many wartime situations could do more to save lives than active defense measures.

#### A. THE DEFENSIVE TASK

Last year, in my appearance before this Committee, I noted that the weight of the strategic threat against the United States was steadily shifting from manned bombers to ICBM's and submarine-launched missiles. The latest intelligence indicates that this trend is continuing and, as I pointed out earlier in this statement, the Soviet missile-launching submarine fleet is building up somewhat more rapidly than we had anticipated last year.

At the same time, the absolute threat from manned bombers is expected to continue to decline over the next several years as the Soviet-bomber fleet grows smaller.

[REDACTED] So the Soviet long-range bomber force will not only be declining, but aging as well. The Soviets have introduced a new medium-range bomber, the BLINDER, which has a capability for a short supersonic dash, but the limited range of this aircraft severely curtails its effectiveness for an intercontinental mission.

Although there is some uncertainty as to how large a bomber force the Soviets could generate at any time during the next several years for an attack against the United States, our best estimate is that no more than 200 bombers could be placed over the United States in a single attack over a period of a few hours. Furthermore, to mount such an attack, the Soviets would either first have to deploy their bomber force to their Arctic bases or stage them through these bases in successive waves. Such action would greatly jeopardize their chance of surprising us and, equally important, their bombers would become vulnerable to our missile attack during the staging operation. Thus, our principal concern in the years ahead must be the dangers of an ICBM and submarine-launched missile attack, and the main thrust of our efforts should be redirected to meet these rising threats.

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Although the Soviet Union may now have, or soon achieve, the capability to place in orbit bomb-carrying satellites, there does not appear to be any logical reason for them to do so, since there are much more efficient ways of delivering nuclear warheads. But we cannot ignore the possibility of that kind of a threat arising in the future, and we must make the necessary preparations now to counter it if it does develop.

## B. DEFENSE AGAINST MANNED BOMBERS

As long as the Soviet Union continues to maintain a force of manned bombers capable of reaching U.S. targets, the United States must continue to support a defense against them. In addition, steps must be taken to ensure that our manned bomber defense system has a capability to survive a Soviet missile attack, since we must assume that the Soviet Union in an attack on the U.S. would strike first with its missiles and then with its manned bombers. Actually, our prime concern in this area during the last two years has been to find some means of reducing the vulnerability of that system to Soviet missile attack.

### 1. Semi-automatic Ground Environment System (SAGE)

The heart of the entire aircraft control and warning network is the semi-automatic ground environment (SAGE) system consisting of 22 direction centers in the U.S. and one in Canada which will be operational next year. None of the U.S. centers is hardened, seven are collocated with SAC forces and two are located in close proximity to large cities. A successful Soviet missile attack on the SAC complex would also destroy about one-third of the SAGE direction centers. The remainder could be destroyed with about 30 Soviet ICBM's.

As I pointed out last year, it would be highly impractical to try to harden the entire SAGE system, particularly its communication links. A more feasible alternative would be to construct a back-up system which could operate independently of the SAGE system in the event the latter were seriously damaged or destroyed, and this is the course we elected to follow. Two years ago the President requested and the Congress approved funds to begin the reconstitution of a manual back-up to the SAGE system. This involved the establishment of NORAD control centers at 27 selected prime radar sites, thereby enabling these facilities to identify enemy aircraft and direct our interceptors against them, in addition to performing their normal search and surveillance functions. Another group of prime radars was provided with a more limited ground control intercept capability and all the U.S. prime radars were linked together with a new communications system, so that they could operate in support of each other even if the SAGE system were destroyed. This effort entailed additional manpower and fallout protection and shielding for the crews, as well as additional communications and emergency power facilities.

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The manual back-up phase was completed last year. Now we are engaged in the establishment of a semi-automatic Back-up Interceptor Control (BUIC) system consisting of 34 stations co-located with prime radars, four of which will be in Canada. The 30 stations in the U.S. will include 20 of the 27 NORAD control centers, which will be converted from manual back-up to the semi-automatic system by furnishing them the necessary computers and related equipment. The funds provided for the current fiscal year (\$25.8 million) will finance the first 15 semi-automatic stations and the funds requested for 1964 (\$25.6 million) will finance the balance. The first group of stations will become operational in fiscal year 1965 and the remainder in fiscal year 1966.

As the semi-automatic system approaches operational status, we plan to phase out six of the 22 SAGE direction centers - four of the centers are co-located with SAC and the other two are close to large cities. The remaining three direction centers that are co-located with SAC forces are in the northern tier of the U.S. and are operated jointly with the FAA under a five-year agreement signed last summer. These adjustments to the aircraft control and warning system are shown in Table 3.

The remaining 16 SAGE direction centers could, by extending their coverage to the adjoining sectors, continue to provide the essential peacetime and pre-strike control. These are important functions. In peacetime we must maintain continuous surveillance of our airspace to check out all intrusions, and this the SAGE system can do quite well. In the pre-air battle period, SAGE could still prevent a Soviet-manned bomber or a simultaneous manned bomber-missile attack from catching us by surprise. As long as we have the ability to detect a manned bomber attack, the Soviets would have to hold their bombers beyond the perimeter of our radar warning system until after their missile attack was launched.

But we must face up to the fact that the SAGE system in its present form would be of questionable value once the attack had started. This is particularly true of those centers co-located with SAC bases which themselves would be prime targets for Soviet missile attack. The BUIC stations, because they will be widely dispersed and away from other prime targets, would not offer very profitable targets for ICBM attack. And, as I noted earlier, the crews will be provided with fallout protection to enable them to function in the post missile attack environment. The phase-out of the six SAGE direction centers will save around \$55 million a year, far more than the additional cost of operating the BUIC stations.

In our realignment of the aircraft control and warning system, we have also carefully reviewed the requirement for prime radar stations. The present system of 163 long-range radars in the United States and Canada provides triple coverage above 10,000 feet at all points. Furthermore, 16 of these radars are located in prime target areas. We believe double coverage above that altitude would be sufficient in the

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period ahead. Accordingly, we propose to phase out 17 of these radars (including the two remaining Texas Towers) during fiscal year 1964, most of which are in prime target areas. This reduction will produce a saving of about \$20 million a year.

## 2. Other Aircraft Control and Warning System Changes

The only other significant changes in the surveillance, warning and control system pertain to the radar picket ships, DEW line extension aircraft and the Missile Master control centers. The number of radar picket destroyer escorts will be reduced from 11 to 6 by end fiscal year 1963. The surveillance mission of these ships in the Atlantic extension of the DEW line will be assumed by Navy aircraft and that force is accordingly increased by two aircraft in 1964. The heavy seas in the Greenland-Iceland-United Kingdom barrier area cause continuous damage to the DER's and seriously reduce the effectiveness of the radars. Navy studies indicate that two aircraft can carry out the surveillance mission more effectively than the ships. Two of the DER's will be inactivated and three transferred to the General Purpose Forces. The picket ships will continue to be used in the Pacific and Atlantic offshore contiguous radar network.

## 3. Manned Interceptors

The manned interceptor force consists of about 860 all-weather aircraft in active units committed to the defense of the North American continent - F-101's, F-102's, and F-106's. In addition, there are about 500 Air National Guard aircraft, a few of which are maintained on runway alert, and a number of Canadian squadrons committed to NORAD.

One of the principal problems we encountered with the interceptor force was its concentration on a relatively few soft bases, many of which were shared with SAC units. Accordingly, our first effort to decrease the vulnerability of the force was devoted to dispersing the interceptors to additional bases. But even now one-half of the active interceptor squadrons are still co-located with SAC. We now propose to disperse these forces further in fiscal year 1964 by providing additional facilities at 21 existing United States interceptor dispersal bases. This action will permit the dispersed deployment of around 25 percent of the active interceptor force for extended periods of time. At the present time,

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these dispersal bases have only a limited capability for the support of interceptor aircraft. The initial cost of this program would be about \$45 million with continuing annual operating costs estimated at \$15 million.

We still plan to retain the existing interceptor aircraft in the force through the 1964-1968 period. As is shown in Table 3, the number of aircraft in the force, however, will decline gradually because of attrition. By the end of fiscal year 1968 the manned interceptor force would consist of about 750 active Air Force aircraft and 600 Air National Guard aircraft. We believe that this force will be adequate against what we presently foresee as a declining Soviet manned bomber threat. However, if the Soviets should deploy a new long-range bomber, which we do not now deem very likely, we would have to reconsider the size and character of our interceptor force and, particularly, the need for modernization. There are a number of aircraft already in production, under development or programmed which could be adapted to the interceptor role with only modest additional outlays for development costs.

First, there is the F-4, a high performance fighter-interceptor now being procured for both the Navy and the Air Force. A fire control system, the APG-59 and a missile, the SPARROW III-6B, which would be suitable for this aircraft, are now under development by the Navy. An F-4 type interceptor, because of range and time-in-air limitations, may be the least effective of the alternatives open to us but it could be made available early.

Another possibility is the Navy A-5 (A3J) attack bomber which is already in operation. A fire control system, the ASG-18, and GAR-9 missile, now being developed and tested by the Air Force, would be suitable for this aircraft. The A-5 type interceptor would be somewhat slower and would cost considerably more than the F-4 but it would have a significantly longer range and "time-in-air" - attributes which are especially important in an interceptor - and it could be made available just as early.

A third possibility is the F-111 (TFX) which we have just started developing for the Air Force and the Navy in a tactical role. A suitable fire control system, the N-11, is now under development by the Navy and a long-range missile, HARPY, is being developed for this aircraft. The F-111 should make an excellent interceptor. Its short take-off and landing characteristics would permit dispersal to and recovery from a large number of airfields. Its very long-range and "time-in-air" would permit continuous air patrol during the probable duration of an air battle. The F-111, in an interceptor version would not, of course, become available until the 1968-1969 period, about two or three years later than either the F-4 or the A-5 (A3J).

A fourth possibility would be a completely new interceptor based upon some of the most recent work being done on airframes and engines. Such an aircraft could use the Air Force-developed ASG-18 fire



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control system and GAR-9 air-to-air missile. It would be a very high performance, but also a very high cost aircraft. It would have a higher speed than the TFX but its range and "time-in-air" would be significantly less.

A fifth possibility would be the adaptation of a large transport aircraft such as the KC-135 or a C-141 as an air-to-air missile platform. Such an aircraft might use an advanced fire control system and a long-range missile like the "EAGLE" which the Navy had under study a few years ago. It would, of course, have a much lower speed than any of the others; i.e., below Mach 1, but it would have a much longer radius of action and "time-in-air" and could carry perhaps as many as 30 air-to-air missiles. The fire control system would be able to track a large number of objects out to long distances and could control a large number of simultaneous interceptions. Because of its size and endurance, the aircraft could also operate as an airborne control center together with shorter range high-speed interceptors. Such an interceptor system would also be less vulnerable to ballistic missile attack since it could take off immediately on warning, remain aloft during the initial missile bombardment, and still have sufficient endurance to engage the follow-on bomber attack.

Whether or not the Soviet Union actually deploys a new long-range bomber, we intend to make a thorough study of the entire problem of modernizing our manned interceptor force and we hope that next year we will be in a better position to make some definite recommendations on this subject. I do not believe, in the light of presently available intelligence and the wide range of options still open to us, that the situation requires us to make a decision now.

#### 4. Surface-to-Air Missiles

As I pointed out last year, the Air Force's BOMARC missiles suffer from essentially the same defects as the manned interceptors, but to an even greater extent. They are concentrated on just seven soft bases. They are, therefore, highly vulnerable to an initial ICBM attack. Nevertheless, we plan to continue the BOMARC force at least through fiscal year 1968, since the large initial investment costs are already behind us.

The NIKE-HERCULES force is still considered a very useful air defense weapon system. Together with the Missile Master and the Birdie control systems, NIKE-HERCULES batteries can operate independently of SAGE. They will also be able to operate together with the BUIC semi-automatic back-up system. Accordingly, we plan to continue the HERCULES force intact through at least fiscal year 1968, but with an increasing share of the force assigned to the Army National Guard for on-site operation.

In fiscal year 1965 we propose to relocate 20 NIKE-HERCULES batteries either to the midwestern part of the United States in order to provide some air defense for our hardened ICBM forces and military control centers, or

[REDACTED]

to protect cities in the Southeast. These units are now located at soft SAC bases or at Thule, Greenland. Since the soft SAC bases would be prime targets for a Soviet ICBM attack, NIKE-HERCULES batteries would not be very effective at such installations. However, they could be of considerable value in defending hard missile sites and control centers against a follow-on attack by Soviet manned bombers, assuming of course that the Soviets did not attempt to destroy these hard sites with their own long-range missiles. This is not an unreasonable assumption because, as I indicated in my discussion of our own strategic retaliatory forces, hard sites are very difficult and costly to destroy with ICBM's.

The initial cost of relocating these batteries would be around \$60 million, an amount well justified by the contribution they could make to the defense of our hard ICBM and control sites. At the very least, they would force the Soviets to program either a large number of strategic missiles or a combination of missiles and aircraft against each of the hard sites - thus making the cost of digging out any one of them extremely expensive.

We are also investigating the possibility of making some of these NIKE-HERCULES batteries mobile to increase the flexibility and survivability of the force.

The NIKE-ALAN batteries manned by the Army National Guard will be phased out of the force by the end of the coming fiscal year.

#### C. DEFENSE AGAINST ICBM ATTACK

The most urgent problem confronting us in the Continental Air and Missile Defense Forces Program is defense against ICBM attack. In this area we are in better shape with respect to warning than active defense.

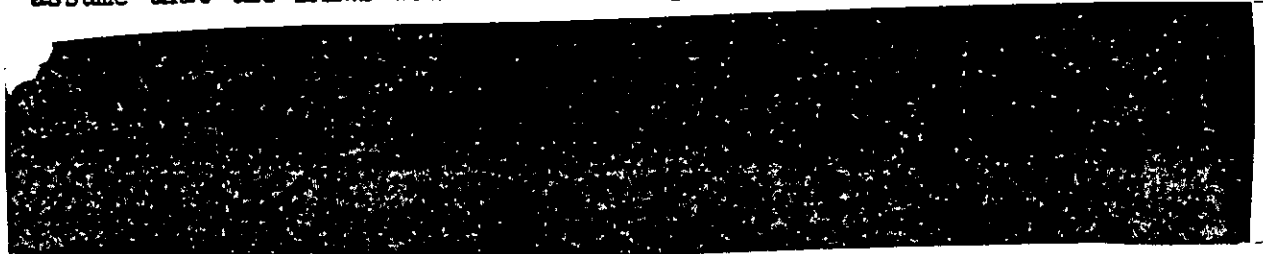
##### 1. Ballistic Missile Early Warning System (BMEWS)

The first two of the three stations in this system - at Clear, Alaska and at Thule, Greenland - are in operation. The third, at Fylingdale, United Kingdom, will reach operational status in fiscal year 1964.

The Thule site is equipped with four detection radars and one tracking radar and can cover launches from the [REDACTED]. The Clear site has three detection radars and together with the Thule site can cover most of the launches from the USSR. The Fylingdale site is being equipped with three tracking radars and together with the other two sites will be able to cover launches [REDACTED].

It is conceivable that the Soviet Union could launch an ICBM attack over the [REDACTED]. But this is

not a very likely contingency since the accuracy of the missile would be considerably degraded and the payload significantly reduced. Furthermore, it is highly unlikely that the Soviets would take the risk of striking only over the Antarctic in an attempted sneak attack. There would be too great a risk of premature discovery, since the missiles would have to travel a much longer distance over a much longer period of time before they reached their targets and, within this period of time, the chances are good that we would have detected their launching, perhaps by an over-the-horizon radar net. Against an attack from a more likely direction, i.e., across the Arctic, with or without an attack across the Antarctic, it is reasonable to assume that the BMEWS would be able to provide adequate warning.



## 2. Missile Defense Alarm System (MIDAS)

Because of the critical importance of warning of ICBM attack, we have made a major effort to develop a system of orbiting satellites which could detect enemy ICBM's in their launch phase, thus adding to the warning provided by BMEWS. Unfortunately, this effort has run into some very serious technical problems. MIDAS is an extremely complicated system, relying on sophisticated sensors and it is in this area that we have encountered trouble. After a most thorough review of this program, we have reached the conclusion that until the sensor problem is solved and sensor reliability significantly increased, there is little value in going ahead with the further development and testing of the orbiting vehicles. In this respect, it should be noted that we have already accumulated a wealth of experience in the launching and tracking of satellites and the recovery of data from them. Accordingly, we have decided to concentrate our efforts on the sensor and reliability problems which are fundamental to an effective satellite-borne missile warning system.

MIDAS is a good example of the risks inherent in rushing ahead with the concurrent development and testing of a highly sophisticated system. Fortunately, the temptation to go forward with concurrent development, production, and deployment of MIDAS was resisted. Otherwise, we could have found ourselves constructing a ground environment for a system which may not reach operational status for years to come.

Through fiscal year 1962 we had already committed \$374 million for the development of MIDAS and \$100 million was originally programmed for the current fiscal year. With the suspension of work on the orbiting vehicles, the level of effort has now been scaled down. We now contemplate that

[REDACTED]

\$75 million will be required this year for the re-emphasized effort on sensor development. We plan to use \$35 million to support the program in fiscal year 1964.

The technical difficulties which we have encountered with MIDAS were not entirely unforeseen, which is why I told the Committee last year that even though theoretically this system could become operational by 1964 or 1965, we did not include it in our force projections. Although we plan to press forward with our research on sensors, it is much too early to say when an operational system might become available. Meanwhile, we will continue to explore other types of warning systems, such as the Over-the-Horizon radar.

### 3. Bomb Alarm System

The Bomb Alarm System is designed to provide automatic detection of nuclear detonations at selected sites in the NORAD area of responsibility and to relay this information immediately and automatically to the central display centers, both for military and civil defense use. The system has been in operation now for about six months.

Now we are studying an improved system, NUDETS, that would provide timely information on the yield, height of burst and ground zero of nuclear detonations for purposes of damage assessment and fallout prediction. The key problem here is to develop sensors with the required degrees of accuracy. Until this problem is solved, it would be premature to plan for the deployment of the improved system.

### 4. NIKE-ZEUS

During the past year we have gained a much broader understanding of the technical problems involved in developing an effective system of ballistic missile defense. It is now generally agreed that the NIKE-ZEUS system currently being tested would not be effective against the kind of ICBM attack we visualize the Soviets would be able to mount in the late 1960's and early 1970's. A thorough review of the available technical possibilities leads us to the conclusion that there are four major improvements which could be made in the present NIKE-ZEUS system. They are:

- a. The use of the ZEUS discrimination radar as a high volume, lower accuracy target tracker.
- b. The modification of the ZEUS missile to reduce the minimum altitude at which an incoming warhead can be intercepted.
- c. The development of a new high acceleration missile (SPRINT) which because of its greater acceleration would increase the time available for discrimination of targets.

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- d. The development of a new phased array radar which could simultaneously acquire, evaluate and track a large number of objects.

In developing the program which we are now proposing, we considered three major alternatives:

- a. The first alternative envisioned the continued development and test of the present NIKE-ZEUS system and a separate limited development of a phased array radar, with initial deployment of the ZEUS system, if it appeared worthwhile, within four years of the time a decision was made. The development cost of such a program over the fiscal year 1964-1967 period is estimated at \$600 million.
- b. The second alternative called for proceeding with all four major improvements with deployment beginning in 1967 of 16 ZEUS batteries (for 12 urban areas) incorporating initially only the first two improvements. Ten more batteries (for 10 additional urban areas) incorporating only the third and fourth improvements would be deployed beginning in 1969. The SPRINT missile and phased array radars (the third and fourth improvements) would then be added to the first 16 batteries and the available ZEUS missiles would be redistributed among all 26 batteries. Development costs for this program, beyond the present fiscal year, would total \$1.4 billion. The initial investment costs for a 26 battery defense would total around \$12.2 billion and the total ten-year cost through fiscal year 1973 would approximate \$20.4 billion. The 22 urban areas which these 26 batteries would defend include approximately 30 percent of our population.
- c. The third alternative envisioned skipping the first two improvements and proceeding on an urgent basis with the development of the SPRINT missile and phased array radars, deferring the decision to deploy the system until mid-1964. The first batteries of this system, designated NIKE-X, could be deployed in 1969 and a 26 battery defense around 22 urban areas could be completed 3 or 4 years later. The development cost for this program, beyond fiscal year 1963, would total about \$1.3 billion. The initial investment costs for a 26 battery defense would total about \$11.7 billion, including the cost of some NIKE-ZEUS missiles of the improved design which would be used in conjunction with the SPRINT missiles. The total ten year cost would approximate \$17.6 billion. Under this proposal the present NIKE-ZEUS test program would be limited to the study of re-entry phenomena and defense techniques, including anti-satellite defense.

[REDACTED]

After thorough consideration of the alternatives, we propose to adopt the third. It incorporates the improvements which are best in the long run and will yield the most effective system which it is possible to visualize at the present time. The first alternative was rejected because it would not yield a system which would be effective against the kind of an attack we could be faced with by the time the system could be built. The second alternative would lead to a final system which is very similar to the NIKE-X in both time and performance, but with an initial configuration only slightly better than that furnished by Alternative "a". It was considered that the marginal protection offered by the early limited capability is not sufficient to offset the extra cost required (\$2.8 billion over a ten year period).

We recognize that there are some reasons why it might be desirable to proceed immediately with the production and deployment of an anti-ballistic missile system, even one with a limited capability. Such a system might reduce U.S. casualties in the case of a "small" or "medium" Soviet attack on our urban areas. Further, it would complicate the design of and tactics for the attacker's offensive weapons.

[REDACTED]

But there are even better reasons why we should not proceed at this time with actual deployment of a system:

- a. We still have a great deal to learn about re-entry phenomena and techniques for discriminating between real warheads and decoys.
- b. We also have a great deal to learn about the effects of a nuclear detonation from one of our intercepting missiles on other elements of the defensive system, especially on the tracking of other incoming and intercepting missiles. If such detonations result in local black-out, thus preventing accurate firing of subsequent interceptors, the possibility of overwhelming the defenses becomes very great. There appear to be solutions to this problem, including firing missiles from widely separated launchers.
- c. Finally, and most important, it is not clear that even the NIKE-X system should be deployed, even if these technical problems were solved.

On balance, therefore, we believe that it is premature at this time to commit ourselves to the production of any system and certainly not to an interim system with admittedly limited capabilities. Instead, we propose to proceed with the greatest urgency in the development of the NIKE-X system, retaining the option to move ahead with actual production and deployment of such a system sometime after mid-1964, if the

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capabilities of the system and the circumstances then obtaining warrant such a decision. I believe that the matter of anti-missile defense is so important that we must make every effort to develop an effective system, even if we cannot now make a decision to procure and deploy it. Accordingly, a total of \$335 million is included in the 1964 budget to initiate the NIKE-X development and continue the NIKE-ZEUS test program.

One final point: the effectiveness of an active ballistic missile defense system in saving lives depends in large part upon the existence of an adequate civil defense system. Indeed, in the absence of adequate fallout shelters, an active defense might not significantly increase the proportion of the population surviving an all-out nuclear attack. For this reason, the very austere civil defense program recommended by the President, which I will discuss later, should be given priority over any major additions to the active defenses.

Moreover, before we make the huge investment required for the deployment of an anti-ballistic missile defense system, we must carefully consider what additional civil defense measures, particularly shielding against blast and thermal effects, might be required for the population in the defended areas. The effectiveness of the NIKE-X system against attacks employing decoys would vary with the altitude at which the incoming warhead must be engaged. The lower the altitude, the better the chances of discrimination, but the greater the chance that the weapon might be detonated before it is intercepted. But, of course, the higher the altitude at which the weapon is detonated, the lower the blast and thermal effects on the ground for any given yield. And, to the extent that we can protect the population against the blast and heat of a nuclear explosion, we can wait longer before engaging an enemy missile and can thus be surer that we engage the warhead, not a decoy.

#### D. DEFENSE AGAINST SUBMARINE-LAUNCHED MISSILES

Second only in importance to defense against ICBM attack is the problem of defense against submarine-launched missiles. The solution to this problem entails three different types of capabilities:

- (1) The detection and tracking of enemy submarines.
  - (2) The destruction of these submarines before they have an opportunity to launch their missiles.
  - (3) The detection, tracking and destruction of the missiles once they have been launched.
- [REDACTED]

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[REDACTED]

We have, however, been studying and testing the feasibility of modifying certain radars to give them a capability to detect missiles launched from submarines. These tests were successful and we now propose to modify selected radars on the East Coast to give them some capability against shorter range missiles launched from submarines or from Cuba, thus providing at least a few minutes of warning. Twenty-five million dollars has been included in the fiscal year 1964 budget for this purpose. We may later wish to provide a similar capability on the Pacific Coast. Furthermore, the NIKE-X system would, if we decide to deploy it, provide a substantial capability against submarine-launched missiles.

E. SPACE SURVEILLANCE

Although, as I noted earlier, attack from enemy satellites is not a very likely threat for the immediate future, it is a possibility and we must develop the necessary techniques and equipment now so that we can quickly provide a defense if the need should ever arise. The first task is to be able to detect and track all objects in orbit. This is now being done through the Space Detection and Tracking System (SPADATS), which is under the control of NORAD. SPADATS is a combination of the Navy's Space Surveillance (SPASUR) system and the Air Force's SPACETRACK. Data from this consolidated system plus additional information from

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scientific centers, other military systems such as BMEWS and the high-powered radars in Turkey and Alaska, are fed to the surveillance center at NORAD where a catalogue of all space objects is maintained.

Work will also be continued on the Satellite Inspector project designed to develop equipment and techniques for inspecting objects in space in order to determine whether they are friendly or hostile.

Because of the potential importance of a workable satellite inspection system we are also providing funds to explore other possible approaches. The Advanced Research Projects Agency (ARPA) budget for 1964 includes funds to study the feasibility of developing techniques for determining ground-based satellite characteristics. Much of the technology that would be required for such a capability is closely related to ARPA's project DEFENDER and the studies will be carried out in conjunction with that project.

Satellite inspection techniques, however, are still in the early stages of development. To provide an interim counter-satellite capacity, we are making certain modifications in the NIKE ZEUS installation at Kwajalein Island to give it a capability, within certain ranges, to intercept and destroy a hostile satellite by May, 1963. We also plan to modify the THOR launch facility on Johnson Island to provide a limited satellite "kill" capability. Relying on tracking data provided by SPADATS, the THOR could intercept a satellite passing within several hundred miles of Johnson Island and make a successful intercept at much higher altitude than NIKE ZEUS -- 700 miles compared to less than 200 for the initial ZEUS installation. We plan to reprogram 1963 funds for this purpose. Additional funds are included in the 1964 budget. This interceptor capability should be ready for use by end fiscal year 1964.

Both of these missile systems would have to rely on a nuclear detonation to destroy the hostile satellite. However, in many circumstances, it may not be desirable to detonate nuclear warheads. Accordingly, we are requesting funds in the Air Force budget to begin the development of the techniques, guidance equipment, sensors, etc., that would be required for a non-nuclear interceptor system.

#### F. FINANCIAL SUMMARY

The Continental Air and Missile Defense Forces I have outlined will require Total Obligational Authority of \$2.0 billion for fiscal year 1964 compared with \$1.9 billion for fiscal year 1963, \$2.1 billion for fiscal year 1962, and \$2.2 billion in the original budget estimate for fiscal year 1962.

#### IV. GENERAL PURPOSE FORCES

The General Purpose Forces include most of the Army's combat and combat support units, virtually all Navy units, all Marine Corps units, and the tactical units of the Air Force. These are the forces upon which we rely to perform the entire range of military operations short of general nuclear war.

##### A. THE REQUIREMENTS

As I pointed out to the Committee last year, over-all requirements for general purpose forces are very difficult to determine with any degree of precision. These forces must be prepared to meet a wide variety of contingencies, ranging from counterinsurgency actions to large-scale wars, anywhere in the world. Accordingly, they must be provided with a great variety of capabilities, weapons, equipment, supplies and training.

Our general purpose forces, to a large extent, are intended for the support of our allies around the world. Their required size and character, therefore, are greatly influenced by the size and character of the forces supported by our allies, as well as by the size and character of the forces which threaten the Free World. Indeed, in the NATO area and the Far East, the forces of our allies clearly outnumber our own, although they lack in many respects the readiness and combat power of our forces.

Because our general purpose forces must complement those of our allies, it is in our interest to assist them in supporting adequate forces when they cannot do the job alone. Thus, indirectly, the Military Assistance Program, and the various economic assistance programs as well, also help determine the size and character of the general purpose forces which we must maintain. And in many cases, dollars spent for foreign aid can make a much greater contribution to the collective defense of the Free World and therefore to our own security, than an equal number of dollars spent for our own general purpose forces.

Fortunately, most of our NATO allies are now in a much better position to support adequate military forces and thereby make a larger contribution to the collective defense. But our allies in the Far East, and particularly those close to and immediately threatened by Communist power, still need substantial amounts of military and economic assistance. These countries usually have adequate manpower but they often do not have the needed weapons and materiel and, in some cases, they cannot even meet their own military payrolls from their own resources. For these countries, military assistance and, in selected instances, economic assistance as well, is absolutely essential if they are to play their proper role in the collective defense.

Where the nations involved have the will to defend their independence, we can help them best by providing the required materiel, training and

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budgetary support for their military forces instead of increasing our own general purpose forces. While we must always be prepared to meet our military obligations to our allies, it is in the interest of the entire Free World for nations threatened by Communist attack or subversion to defend themselves insofar as possible without direct intervention by U.S. military forces. Thus, from every point of view, it is in our own national interest to help provide these nations with both the military and the economic means to defend themselves.

The requirement for active duty general purpose forces is also influenced by the size and character of our reserve forces. To the extent that our reserve units can be brought to bear in a timely manner, the requirement for active forces is reduced. But to be fully effective, certain portions of our reserve forces must be maintained at a high level of readiness, since as we have seen, a quick response on our part to Communist aggression can do much to forestall the need for a much greater military effort later, when the military situation has already deteriorated. Thus, there is a great premium on highly ready reserve forces which can be used to augment quickly our active forces.

Because the time element is so important in limited war situations, we must also take into account other means for reducing reaction time in our evaluation of the General Purpose Forces requirements:

- (1) The deployment, in advance of aggression, of suitable U.S. forces to potential trouble areas;
- (2) Measures to maintain the readiness of the forces held in strategic reserve in the U.S. for quick deployment overseas;
- (3) Adequate airlift and sealift to move additional forces to the place of need; and
- (4) The prepositioning of equipment and supplies in potential trouble areas overseas.

All of these considerations -- the broad range of military capabilities required, the coordination of our efforts with those of our allies, the close relationship between our own military program and the assistance we give our allies, the abilities of our reserve components, and the various alternatives we have for increasing our readiness -- must be taken into account in determining the requirements for general purpose forces.

Last year I mentioned that we were far from satisfied with the then-available analyses of the longer-range aspects of the General Purpose Forces program. Since that time we have made a great deal of progress in exploring and defining this requirement. Last spring I asked the Chairman of the Joint Chiefs of Staff to establish a working group to study the requirements for U.S. General Purpose Forces to meet a number of possible non-nuclear combat

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situations in various overseas potential trouble spots. This group was headed by Vice Admiral H. D. Riley, the Director of the Joint Staff, with Lt. General T. W. Parker, now Army Deputy Chief of Staff for Military Operations, serving as Vice Director and included about 110 officers from all the Services. Parallel studies were conducted in the military departments. The group was given considerable freedom to develop study situations which took the form of several different sets of assumptions and objectives. Then the group was provided with the latest intelligence data and was asked to examine the general purpose forces requirements to meet various kinds of enemy attacks in four broad geographic regions -- Europe, the Middle East, Southeast Asia, and Northeast Asia. Including those examined by the military departments, [REDACTED] for example:

(1)

(2)

(3)

(4)

(5)

(6)

In each of these kinds of cases, the specific requirements for ground forces and tactical air forces were examined in considerable detail. Requirements for naval forces, because of their special character, were examined primarily on a world-wide basis. This latter study proved to be particularly complex and difficult to define, and we will be giving it much more intensive study in future months.

Although I consider the resultant studies highly useful, I do want to caution that, in an effort to keep them manageable, a certain degree of over-simplification was inevitable. We are under no illusion that any of these situations would actually develop exactly as postulated for purposes of the studies. They never do and we know it. Furthermore, each situation, of necessity, had to be examined solely within its own context and no attempt was made to evaluate its effect on the world situation as a whole. Conversely, the interaction of other likely world events on the particular situation under study was also omitted from consideration. For example, when we studied

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assume that the Soviet Union could not afford to leave itself open to Red

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Chinese aggression by committing all of its forces to a European war. Thus, the growing cleavage between Red China and the Soviet Union could well serve to limit the size of the forces which the Soviet Union could deploy on the European front.

So too, the United States would have to be prepared to meet concurrent threats in more than one part of the world, and this fact has served to limit the forces which we could have available for any one of the various contingencies we examined in the study. Accordingly, in assessing the results of this study, we assumed, for example, that the five divisions and non-divisional forces in Europe would not be available for deployment to the Far East and that, conversely, the two divisions in Korea and the one division in reserve in Hawaii would not be available for use in Europe. Although we did not take it into account explicitly, we are, of course, aware that [REDACTED]

Furthermore, the courses of action postulated for each case were not necessarily the courses of action we would actually follow in the event the Communists did attack. For example, while we examined the forces required to throw back a Soviet attack on Iran, no commitment actually exists to deploy such forces to Iran in the event of Soviet aggression. We might well choose to assist Iran in quite a different manner, depending on the over-all world situation obtaining at the time of attack.

Nevertheless, with all of these limitations, the General Purpose Forces studies constitute a very useful approach to the problem of determining the force requirements for limited war. They have been of great assistance in assessing the capabilities of our land and tactical air forces to cope with situations short of general war occurring in various parts of the world, in some cases in more than one place at the same time. They have also given us a much better idea of what we could do with our non-nuclear forces in these kinds of situations, and a much better grasp of the size and composition of the forces -- both our own and the enemy's -- that would most likely be involved.

In addition to the General Purpose Forces Study and the unilateral Service studies, we also had the advantage of the strategic evaluations of the Joint Chiefs of Staff. Drawing on all of these sources [REDACTED] that:

- (1) [REDACTED] This is simply the principle of getting there first with the most, before the situation deteriorates and greater forces are required to recover lost ground.

- (2) [REDACTED]

- [REDACTED]
- (3) Proper support of indigenous forces on the scene would give a greater return to collective defense than additional U.S. forces.

(4)

(5)

The Communist threat in Europe is the largest single threat we face in the world and because Western Europe, aside from the United States, represents the most important center of Free World power, it is also the threat most dangerous to our own security. The loss of Western Europe to the Soviet Union would drastically alter the balance of power in the world.

At the present time there are 22 "combat-ready" Soviet divisions in East Germany and Poland. This force is supported by 35 East German, Polish and Czech divisions in lesser states of readiness. These satellite units

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Backing up this force are 57 Soviet divisions at "combat" strength (generally between 70% and 85% of authorized strength) and 65 more at low strength (approximately 30%) or only in cadre strength. In total, the Soviets have about 2 million men in active army units. There are, in contrast, 3.3 million in NATO ground forces, with 2.3 million of these in Europe. Only 23 of the Soviet divisions in the Western USSR are ready for deployment and combat without additional training.

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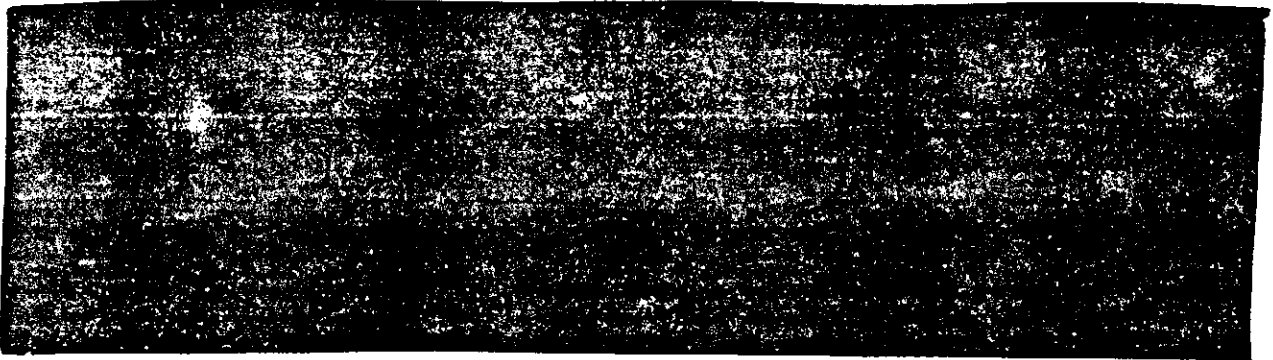
If such a buildup were unmatched by Western reinforcements, a prompt Soviet attack would have a high probability of breaking through today's NATO defenses. After detection of their buildup, the Soviets could continue rapid reinforcement to a total of about 60 Soviet divisions within 30 days. Additional divisions would be in place on the northern and southern flanks. Eventually, they might try to mobilize, train, deploy, and support as many as 130 divisions on the Central Front. However, it is by no means certain that they would want to or be capable of deploying a force of this size. Their tactical doctrine and maneuvers suggest that they would be reluctant to commit a force of more than 60 divisions given the possibility of a nuclear attack on them. In any case, air interdiction would reduce their logistic ability to support such a force.

Opposing these Communist forces at present is a NATO force of 25 divisions and 5 brigades (3 brigades being about equal to 1 division). While

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the United States complement of 5 divisions, 3 brigades and separate regiments is fully manned and combat ready, most of the forces of the other NATO nations have major deficiencies.



These force goals are well within the capabilities of NATO. We believe that the U.S. contribution of 5 M-Day divisions, 3 brigades and separate regiments, plus 9 more "second echelon" divisions is a fair share of the total requirement, considering our responsibilities for furnishing the strategic nuclear forces for NATO and for supporting allies in other parts of the world. The balance of the NATO force requirements will have to be made up by our European NATO partners and this was the view I expressed at last December's meeting of the NATO Council of Ministers. We estimate that a total additional expenditure on their part of about \$1-3/4 billion a year for the next five years should overcome the major deficiencies between their present forces and their MC-26 goals. Until these requirements are met, the defense of Europe against an all-out Soviet attack, even if such an attack were limited to non-nuclear means, would require the use of tactical nuclear weapons on our part.

Although we are still a long way from achieving the non-nuclear capabilities we hope to create in Europe, we are much better off in this regard than we were two years ago. Today the NATO forces can deal with a much greater range of Soviet actions, without resorting to the use of nuclear weapons. Certainly, they can deal with any major incursion or probe. But we must continue to do everything in our power to persuade our Allies to meet their NATO force goals so that we will possess alternative capabilities for dealing with even larger Soviet attacks.

With regard to land-based tactical air power, we are in a considerably better position than we are with regard to ground forces in the NATO area. The Bloc currently has available in Central Europe about 3,300 aircraft plus about 450 surface-to-air missile launchers. They could increase their fighter total in that area to about 4,200 from various sources including the Western USSR. NATO has in Europe about 3,100 aircraft, and 1,060 surface-to-air missile launchers. The number of aircraft could be swiftly increased to about 4,000.



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These totals do not reflect the definite qualitative superiority on the side of the Alliance. For example, the bulk of Allied tactical aircraft can carry twice the payload twice as far as their Bloc counterparts. In fact, most Bloc aircraft could not reach important NATO targets from available bases, especially at the low altitudes at which our air defenses would force them to fly in a non-nuclear conflict. We also have a better photo reconnaissance capability. In sum, despite certain weaknesses, our comparative offensive air situation is a strong one.

The NATO tactical air forces have several serious weaknesses which, if not corrected, would tend to degrade NATO's other advantages.

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We are planning a number of steps to overcome the deficiencies in our own forces, which I will discuss later in context with the Air Force general purpose forces. Air superiority in the NATO area is essential to our defensive strategy since we depend upon that superiority to disrupt enemy supply lines and prevent reinforcement of Bloc ground forces in Europe.

We have in Europe a slight superiority in numbers of Air Defense all-weather aircraft, better trained crews, and more sophisticated air-to-air combat systems, ordnance and warheads. Moreover, Soviet missiles now in the satellite countries are ineffective against aircraft flying below 3,000 feet while we have a present and growing capability in HAWK and NIKE missiles against both low and high flying aircraft. Although many of the Bloc weaknesses, including those at low altitude, will be reduced over time, a NATO air defense advantage is likely to remain for some time. We also have substantially more surface-to-air missile launchers which would help to reduce the effectiveness of their aircraft.

In the longer run, as the Soviet Union increases both the quantity and quality of its surface-to-air missile forces, the vulnerability of manned tactical aircraft will increase and we will probably have to turn increasingly to surface-to-surface missiles for a tactical offensive capability. I will also discuss this point in greater detail later.

The Navy general purpose forces are, in our judgment, at least adequate to the limited war requirements in both size and composition. The principal problem here is the rate of new ship construction required to assure that the Fleet remains effective over the program period. I will discuss this particular problem when I talk about the shipbuilding program.

In summary, our requirements studies indicate that, except in the case of a massive attack in Europe, we have sufficient active forces for the initial stages of conflict, without resorting to nuclear weapons. It would, however, be necessary to mobilize reserve component units rapidly at the start of a conflict in order to provide the additional forces needed to sustain combat and to reconstitute the strategic reserve.

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And, in all cases, it is clear that ultimate allied success would be heavily dependent upon achieving early air superiority and upon having adequate air and sea lift.

I would now like to turn to the programs proposed through fiscal year 1968.

B. ARMY GENERAL PURPOSE FORCES

1. Active Forces

Since the end of fiscal year 1961 we have increased the active duty strength of the Army from 860,000 to 960,000, and the number of combat-ready divisions from 11 to 16. Three divisions engaged in training were brought up to full combat readiness and two new divisions were added. The two new divisions were organized initially on the new ROAD concept, which is designed to increase organizational flexibility, non-nuclear firepower, and tactical mobility. The Army's experience with these two ROAD-organized divisions has been most satisfactory and we now plan to have all 16 divisions organized on the ROAD basis by the end of fiscal year 1964.

We have also authorized a temporary increase in the Army's end fiscal year 1963 active duty strength, from 960,000 to 980,000, in order to reduce the hump introduced into the recruit training cycle by the sharp increase in draft calls during the Berlin crisis in 1961. Draft calls in the late summer and fall of 1961 were increased from 6,000 in July to a peak of 25,000 in September and did not return to the previous level until March 1962. Unless some special action was taken to level out the intake during 1963, this peak would be repeated every two years, seriously disrupting the Army's training program and causing temporary reductions in combat readiness. The additional 20,000 spaces will permit the Army to begin training replacements for the men drafted in the late summer and fall of 1961 early in 1963, instead of later in the year. This will spread the personnel intake over the entire calendar year 1963 and can be accomplished by only a small increase in the monthly draft calls during the first six months of this year.

We now propose to increase the Army's active duty strength for end fiscal year 1964 to 975,000. The additional 15,000 men will permit the Army to organize provisional units to test some new concepts proposed by the Howze Board on Tactical Mobility Requirements. This Board, headed by Lt. General Howze, was formed last year at my request to study without regard to traditional military doctrine, the role of Army aviation.

The Board recommended: (1) That two new types of completely air-mobile combat units - air-assault divisions and air-cavalry combat brigades - be created; (2) That a number of special purpose air units, air transport brigades and corps aviation brigades be formed to give additional reconnaissance and lift capability; and (3) That the number of Army aircraft be increased substantially to enhance the mobility of the ROAD division.

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The new combat units proposed by the Howze Board entail radical changes, not only in equipment but in tactical doctrine as well. As presently envisaged, the air-assault division would be equipped with about 460 helicopters and Army type fixed-wing aircraft, compared to about 100 in the ROAD division. Air transportable weapons and aircraft-mounted rockets would be substituted for heavy artillery, and transport aircraft would be substituted for some ground vehicles. The air-assault division would thus have a high degree of tactical mobility enabling it to make deep penetrations into enemy territory, to out-flank the enemy by moving over otherwise inaccessible terrain to conduct quick strike delaying actions, and to serve as a highly mobile reserve. The air-assault division could perform most of the missions assigned to the airborne division and could probably do so with greater effectiveness. It would be particularly valuable for conflicts in areas outside of Europe.

The air-cavalry brigade, like the air-assault division, would also be equipped with a large number of helicopters and would perform a role much like the horse cavalry of earlier years. Because of its great mobility, it would be very useful for attacks on the flank or rear areas of the enemy. It would also be highly effective against armored penetrations as it would have large numbers of anti-tank weapons including missiles mounted on the helicopters.

The various special purpose units would have the primary mission of providing logistical support to the air-assault division as well as other Army combat units. The principal logistics unit would be the air-transport brigade, one of which would be formed to support each air-assault division. This brigade would have 134 aircraft and helicopters including 80 AC-1, CARIBOU, a transport that can carry about 6,000 pounds of cargo. The brigade's aircraft would pick up equipment and supplies delivered by Air Force units and carry them to where they are needed by the ground forces. In other words, the Air Force would provide the "wholesale" distribution and the Army air-transport brigade the "retail" distribution.

While I am convinced that these new types of units could significantly increase the Army's capabilities, the proposals are so revolutionary in character and so closely related to the Air Force mission that we deem it prudent to test thoroughly the concepts before we commit ourselves to their full-scale implementation. The Board study (due to the limited time available) did not take full account of how the Air Force might contribute to the Army's tactical mobility. Furthermore, it is not yet clear how the increase in Army aircraft would reduce the requirements for "lines of communication" (LOC) forces, such as truck, pipeline and depot units, or how the air-assault divisions might substitute for airborne divisions which have a very similar mission. There are also some serious questions as to the need for much of the transport capability which would be provided by the Army air-transport brigades. With new airlift aircraft now being procured -- C-130 and C-141 -- as well as the possible modification of the C-123's and C-130's to give them better STOL characteristics, the Air Force may be able to deliver supplies

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directly to the using units. These aircraft have very good short take-off and landing characteristics and the Air Force is rapidly improving its operating skills in this area.

For these reasons, I believe that further test and evaluation is needed before any radical changes are made in the structure of the Army combat forces. Therefore, we propose to take the same approach we took last year with respect to the ROAD plan and test before we implement. We will then be in a better position to make sound judgments on both the cost and military effectiveness of the proposals in the light of other available alternatives.

Meanwhile, we are proposing to increase substantially our procurement of Army aircraft to improve the mobility of existing forces and to conduct the planned tests.

The Army General Purpose Forces Program through fiscal year 1968 is shown on Table 4. Three infantry divisions, currently deployed in Europe, will be reorganized as mechanized divisions under the ROAD concept, making a total of five mechanized divisions by end fiscal year 1964. The five mechanized, six infantry, three armored, and two airborne, a total of 16 combat-ready divisions, will be continued unchanged through fiscal year 1968.

The ROAD reorganization will also cause some changes in the non-divisional elements shown on Table 4. The eight infantry battle groups will be phased out in fiscal year 1964 and the number of armored cavalry regiments planned at five for the end of the current fiscal year will be reduced to four and continued at that level through fiscal year 1968. The men and equipment of the units thus eliminated will be used to increase the number of brigades. Instead of three at the end of the current fiscal year, we now plan five, and the number of brigades will be increased to eight during fiscal year 1964.

The Army has also reorganized and increased the strength of its Special Forces units which constitute its primary, specialized counterinsurgency capability. The four Special Forces groups included in the force structure last year have been increased to six and the strength of these units has tripled over the last two years to a total of 5,600.

The number of air defense battalions will begin to increase in fiscal year 1966 as MAULER, a new air defense missile for use in the forward battle area, comes into the force structure. We currently plan to have one MAULER battalion per Army division; all 16 MAULER battalions are expected to be activated by the end of 1968. The number of HERCULES and HAWK battalions remains unchanged from last year.

No major changes have been made in the number of missile commands or surface-to-surface missile battalions, except that we now plan to retain all six LACROSSE battalions in the force through 1968. The reduction in the total number of surface-to-surface missile battalions from 1963 to 1964 reflects the phase-out of liquid fueled REDSTONE and CORPORAL missiles as they are replaced by the solid fueled SERGEANT and PERSHING.

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There have been no significant changes in the numbers of separate artillery and combat battalions and aviation companies since last year.

## 2. Army Reserve Components

The General Purpose Forces Study confirmed our conclusion last year that the Army's reserve components should satisfy two specific requirements:

- (a) The ability on short notice to augment significantly the Active Army during periods of grave international tension or during limited wars.
- (b) The ability to provide a base for a large-scale mobilization in the event of general war.

The Army Reserve and Guard program in the past placed an undue emphasis on the second capability and did not provide the highly ready forces needed to fulfill the first requirement. Many of the limited war situations studied last year pointed up the need for a few reserve divisions in a high state of readiness. In those kinds of situations where more than a "few" reserve divisions were required, a general mobilization was indicated and the second of the two capabilities which the Guard and Reserve should have would come into play. But even in a general mobilization situation, the means of deployment and the amounts of equipment available to us would limit the number of divisions that could be moved into combat in the first four or five months of a war. After that time the lower priority reserve component divisions would begin to become available, and several months later new divisions, formed after the beginning of hostilities, would be ready.

Accordingly, after lengthy discussions with the appropriate Committees of the Congress, the State authorities, and the representatives of the Army Reserve and Guard interests, i.e., the Army's General Staff Committee on National Guard and Army Reserve Policy (Section V Committee) and the Reserve Forces Policy Board, we proceeded to implement the plan outlined to the Committees last year. Briefly, the plan calls for:

- (a) The establishment of a priority force consisting of six divisions and their supporting forces; eleven brigades; the units required to round out the active Army; the on-site air defense battalions; and the training and operational base units. This force will be manned at 75 percent or more of their TO&E strength and will have readiness dates of eight weeks or less after mobilization.
- (b) The establishment of two theater reinforcement divisions and supporting forces for Alaska and Panama, to be manned at 70 percent of the TO&E strength with readiness dates of 4 to 12 weeks.

- [REDACTED]
- (c) Twenty-one divisions and other non-divisional units manned at 53 to 60 percent of TO&E strength with readiness dates of approximately 24 to 36 weeks.
  - (d) Continuation of certain other training and base units and units for the support of other Services.
  - (e) The elimination of eight low priority divisions (four Army National Guard and four Army Reserve).
  - (f) The elimination of obsolete type units or units excess to the requirements of the active Army and the addition of new units which are required but which presently do not exist or are in short supply. In all, about 1,850 of the existing 8,800 units will be eliminated and about 1,000 new units will be added.
  - (g) All Army reserve component personnel now on drill pay status will be afforded an opportunity to continue their participation.
  - (h) No company-size unit will be withdrawn from any community unless another unit is available within 35 miles.

The Congress, last year, included language in the Appropriation Act which requires the Department of Defense to program a paid drill training strength of 400,000 for the Army National Guard and 300,000 for the Army Reserve in fiscal year 1963. This we have done, subject to three conditions which I set forth in my letter to the Acting Chairman of the Senate Defense Appropriations Subcommittee, namely:

- (a) That all units maintain at least 90 percent MOS-qualified personnel.
- (b) That the reserve components apply the same recruiting standards as the active Army, and
- (c) That no units be permitted to exceed the authorized strength.

To this list of conditions, we have since added one more, i.e., that personnel on paid drill training status be required to meet acceptable standards of attendance and performance. We believe that these conditions are fair and proper and, indeed, are positively necessary if we are to have the militarily ready reserve structure I outlined.

However, for a number of reasons it will not be possible for the Guard and Reserve to reach their authorized strengths in the current fiscal year. As I pointed out in my letter to the Acting Chairman the initial group of six-month trainees is now completing its 5-1/2 years of obligated service and many of these recruits are not continuing in the program. We

[REDACTED]

presently estimate that about 272,000 men or more than 1/3 of the present drill pay strength will leave the Army reserve components during the current fiscal year. Our experience to date indicates that the number of qualified six-month trainees that can be recruited may well fall short of the authorized input.

In addition, the number of two-year draftees completing their active duty will be unusually small this year. Only 60,000 men were drafted into the Army in fiscal year 1961 compared with 90,000 in the previous year and 158,000 last year. As a result the number of two-year draftees available for recruitment by the reserve components will be the smallest since the Korean War.

Consequently, we now estimate that the reserve components will end the current fiscal year with a drill pay strength of no more than 650,000, about 274,500 in the Army Reserve and 375,500 in the Army National Guard. For end fiscal year 1964, we again propose to authorize and program a total of 700,000 for the Army reserve components. Again, we do not believe that they will actually be able to attain that strength. Our best estimate at this time is that the Army National Guard could achieve an end strength of 384,400 and the Army Reserve, an end strength of 281,000. Accordingly, we have budgeted for these numbers, which will be adequate, if properly distributed, to meet our requirements.

More important to the readiness of the reserve forces than numbers of men is the availability of modern equipment and here we are taking drastic action to remedy a long-existing deficiency.

### 3. Army Procurement

The chronic shortages of weapons, equipment, ammunition, and supplies required to support the Army's General Purpose Forces in combat have been for some time one of the most serious deficiencies in our overall defense posture, and this has been particularly true with respect to non-nuclear munitions. The prompt, but orderly, correction of this deficiency has therefore been one of our highest priority goals. Two years ago, in President Kennedy's amendments to the original 1962 budget, \$700 million was added for Army procurement. For the current fiscal year we requested, and the Congress appropriated, more than \$2-1/2 billion for this purpose, almost double the average level of the five years prior to 1962.

Last year, as a first step toward ensuring some internal balance within the total of Army stocks, I established an interim procurement objective: namely, the provision of sufficient equipment and supplies to support a 22-division force (16 active and 6 reserve component divisions) for a period of six calendar months, with an average of two-thirds of the force engaged at any one time. Attainment of this goal would have provided sufficient stocks for 88 division months of combat.

[REDACTED]

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Now we propose to take the next step toward a higher state of readiness and raise the procurement objective to provide the initial complement of combat equipment required for 16 active and 6 priority reserve component divisions, plus such replacement spares and combat consumables as are necessary to maintain 16 divisions and supporting forces in combat for the entire period between D-Day and the time when our production lines would be able to catch up with the rate of combat consumption.

Attainment of the 1964 objective will provide a vast increase in combat capability over what we had a year and a half ago during the Berlin crisis when I was told that the Army had stocks sufficient for less than two months of conventional combat in Europe. Already we have built up the stocks to a point where the Army could support 16 divisions in combat for three months and could support seven divisions in Europe for six months. The cost of attaining the new objective will be high -- a total of \$3.3 billion for Army procurement in fiscal year 1964, an amount far more than double the average for the five years prior to fiscal year 1962.

The 1964 Army procurement of weapons and materiel will give first priority to those items in which we have conspicuous shortages and then to those new items which promise to yield large improvements in effectiveness in relation to their cost. We cannot afford to modernize simply for the sake of modernizing; in other words, we cannot afford to buy high cost new items which offer only a marginal increase in effectiveness over the items that they are designed to replace.

Because of the large number and variety of individual "line items" in the Army's procurement list for the General Purpose Forces, I will limit myself to the discussion of the broad categories, shown in Table 6, mentioning only the most important items within each category as examples of the progress we are making to attain our procurement objectives.

a. Aircraft

The 1964 budget provides \$522 million for the procurement of about 1,600 Army aircraft, nearly three times the number procured in 1962 and 1963, and four times the number in 1961. The largest item is the UH-1B/D IROQUOIS helicopter, which can be used for transporting troops, cargo, and casualties and which will replace older helicopters and fixed wing aircraft now in use. The 1964 buy of 710 IROQUOIS will raise the inventory to nearly 1,500.

The 1964 procurement of 60 CH-47A CHINOOK medium transport helicopters will increase the inventory of this aircraft to 129.

The 1964 program also includes 360 observation helicopters, raising the inventory to about 1,900.



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We also plan to procure an increased number of fixed wing aircraft during the coming year. The largest dollar item is the OA-1 MOHAWK combat surveillance aircraft, of which 50 will be procured. The Army plans to arm this aircraft and use it for the close support role in counterinsurgency warfare, as well as for surveillance. The 48 CARIBOU twin-engine transport aircraft in the 1964 program will raise the inventory to 185.

The Army's training aircraft fleet will be modernized and expanded by the procurement of 310 training helicopters and 60 fixed wing utility trainers. Also included is about \$33.8 million for aircraft spares.

b. Missiles

Almost \$581 million is included in the 1964 budget for Army missiles. The planned HAWK and HERCULES procurement of 1,880 and 720, respectively, will fully meet combat consumption and training requirements and will keep the production lines going for another year. The initial procurement of 164 MAULER air defense missiles is planned for 1964 with larger buys in later years. The mobile version, mounted on a tracked vehicle, is being designed to be fired when moving and will be deployed in the forward battle area and with mobile combat forces as a replacement for the 40 mm. self-propelled guns. The ground version of MAULER can be carried by helicopter and operated from unprepared positions and will be particularly useful for airborne and other air mobile forces.

Last year I informed the Committee that we were still having trouble with the development of the man-carried REDEYE air defense missile. These difficulties have not as yet been fully overcome and we do not expect to obligate the 1963 funds until early in fiscal year 1964. Therefore, we will not need additional funds for this missile in 1964.

The proposed procurement of 471 LITTLE JOHN and 93 SERGEANT missiles should be the final buys of both missiles. Although adequate numbers of HONEST JOHN rockets are also available to meet the inventory objective, we plan to procure an additional 600 in 1964, the minimum production-sustaining level. We also plan to procure an additional 153 PERSHING missiles, which will give us a total of about 300 missiles. Another procurement of PERSHING is planned for next year.

About \$45 million is included for ENTAC and SS-11 anti-tank missiles. The 1964 buy will raise our inventory of the ENTAC missile to over 90 percent of the objective. The SS-11 is an accurate, wire-guided anti-tank missile designed to be carried by the IROQUOIS helicopter and has proven to be quite effective in extensive field testing.

For missile spares, about \$22.3 million is included in the 1964 budget.

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c. Weapons and Combat Vehicles

A total of \$489 million is included in the 1964 budget for weapons and combat vehicles, compared with \$535 million in 1963 and \$594 million in 1962.

One of our most important objectives has been to replace the old 30-caliber weapons with the 7.62 mm family of small arms -- the M-14 rifle and the M-60 and M-73 machine guns. These weapons replace a large variety of World War I and World War II types and thereby reduce the number of different weapons in the Army inventory. Moreover, all of these new weapons fire the standard 7.62 mm round used by the other NATO countries, thus simplifying logistics and training requirements.

The 1964 program includes 230,000 M-14 rifles, which will give us about two-thirds of the current inventory objective of about 1.9 million rifles, and meets all the requirements of the active Army and a portion of the priority reserve forces.

The procurement of 12,000 M-60 machine guns will raise our readiness level for this item to over 75 percent of the current objective. The remainder will be met by 30-caliber machine guns. We also propose to buy another 3,175 M-73 machine guns for use on tanks and armored vehicles, raising the inventory to about 9,000 -- 81 percent of the objective -- and providing all of the active force requirement and a start on the reserves.

Another important part of the Army's modernization program is the introduction of a new family of self-propelled artillery, including 105 mm, 155 mm and 8" self-propelled howitzers. The 450 howitzers included in the 1964 budget will give us about three-quarters of the inventory modernization objective. We also plan to procure an additional 732 self-propelled mortar carriers, raising the inventory to 1,572 -- about one-third of the modernization requirement.

About \$13 million is included to start procurement of a new 105 mm towed howitzer. This howitzer is light and rugged and can be transported by air and air-dropped. For DAVY CROCKETT, \$11.4 million is provided.

Funds are included for 240 M-60 tanks in order to keep the production line going for another year. This will give us a total of 3,573 M-60 tanks, more than enough to equip all the U.S. forces in Europe. Army forces in other areas will continue to use M-48 series tanks of which we have about 10,000 in the inventory. We believe that the M-48, which carries a 90 mm gun, will be adequate for use in these other areas until a new main battle tank, now under component development, becomes available.

The planned 1964 buy of 2,000 M-113's will raise our inventory of these modern, air transportable, amphibious vehicles to about 11,600 or 84 percent of the current inventory modernization objective, sufficient to equip the

[REDACTED]

active forces and begin equipping the Reserves. The Federal Republic of Germany is also buying large numbers of these personnel carriers and sales negotiations are under way with other countries.

Funds are included for 1,200 T-114 armored reconnaissance vehicles, which will give us nearly 60 percent of the modernization objective, and an additional 630 command post vehicles, which will fully meet the active force requirement and begin the equipping of the Reserves.

d. Tactical and Support Vehicles

About \$340 million is included in the 1964 budget for 70,000 trucks, trailers, and other non-combat vehicles, slightly less than was provided for the current fiscal year. The largest dollar items are 1/4, 3/4, 2-1/2 and 5-ton trucks, 30,000 of which will be procured. Our over-all objective for these four tactical trucks is about 270,000 and the 1964 and prior-year procurements will provide about 60% of this modernization objective. Adequate substitute items are available to meet the "hard core" of the remaining requirement.

e. Communications and Electronics

For electronics and communications equipment we are requesting about \$406 million, about one-third more than was provided in 1962 or 1963. The largest item, \$59.0 million, is for STARCOM, the Army's strategic communications system. This system will provide the necessary rapid strategic communications required by Army forces deployed world-wide and by the the Strike Command, should any of its forces be deployed.

About \$20 million is requested for 10,000 AN/PRC-25 "man-portable" radios, a sturdy, effective set for company-size combat units, raising the inventory to about 60 percent of the modernization objective. The balance of the requirement will be met from present stocks of older radios. Twenty-two million is included for 5,000 AN/VRC-12 vehicular radios, increasing stocks to 51 percent of the modernization objective. Present assets of less desirable but usable vehicular radios are available to meet the remainder of the requirement.

f. Other Support Equipment

About \$240 million is requested for the procurement of other support equipment in 1964, about \$25 million more than in the current year and \$100 million more than 1962. This category includes construction equipment such as cranes, graders and tractors; small boats; materials handling equipment such as fork lift trucks and warehouse tractors; chemical warfare equipment such as protective masks and warning devices; and other heavy equipment, including the amphibious lighters, BARC and LARC.

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g. Ammunition

Army ammunition procurement in 1964 will total \$589 million, more than 50 percent higher than the amounts provided in 1962 or 1963. The most significant items are 7.62 mm cartridges, 105 mm howitzer cartridges, and 155 mm howitzer projectiles.

Nearly 900 million rounds of the 7.62 mm cartridge will be procured in 1964, compared with 519 million rounds in 1963, fully meeting the inventory objective and providing adequate ammunition for peacetime training purposes.

We plan to procure 380,000 105 mm high-explosive cartridges of various types, including the initial buy of a new extended range cartridge. In addition, 300,000 of the XM-402 extended range 155 mm howitzer projectiles will be procured in 1964, increasing the inventory to about 860,000 rounds, or about 40 percent of the current modernization objective.

h. Production Base Program

The Army's Production Base Program will require \$143 million in 1964, up slightly from the 1963 level and about the same amount provided in 1962. The increase in 1964 reflects the requirement for additional production facilities associated with the major expansion in the procurement of Army weapons and equipment.

C. NAVY GENERAL PURPOSE FORCES

1. Navy Forces - Ships

As I indicated earlier, we do not yet have acceptable situation-by-situation analyses of naval requirements comparable to those now available for ground and tactical air forces. Until such analyses become available we are accepting the Navy's General Purpose Forces shown on Table 7 as being generally the right order of magnitude and composition. It is chiefly with regard to the rate of modernization that differences of opinion exist, as was so clearly brought out in last year's hearings before the Special House Armed Services Subcommittee on Composition of the Fleet and Block Obsolescence of Naval Vessels.

I am well aware that the Navy faces a difficult problem of "block obsolescence" and that well over half of today's Fleet was built during or just shortly after World War II. While it is true that these ships are now approaching the twenty-year mark, the useful lives of many combatant types still can be extended by rehabilitation and modernization. Support and auxiliary types, in most cases, can be maintained in a serviceable condition much longer than twenty years. The right solution to the "block obsolescence" problem is not to rush into a crash program of ship construction now and thereby create another equally serious dilemma for the future.

[REDACTED]

Rather, we should overcome the problem gradually over a number of years - all the time, of course, ensuring that adequate naval power is always available to meet the essential tasks of national security. This, I believe, our proposed program will accomplish.

For end fiscal year 1964 we plan a General Purpose Forces fleet of 836 ships, the same number planned for the end of the current year. The fleet will consist of 15 attack carriers, 9 anti-submarine warfare carriers, 14 cruisers, 23 frigates, about 235 destroyers and escorts, 107 submarines, and over 430 amphibious, mine warfare, and fleet support ships. As new and more capable ships are delivered the overall number will gradually decline to an estimated 800 ships by end 1968. These numbers, of course, are highly tentative. Changing circumstances may require a higher or lower number but we would have time to make the necessary adjustments.

a. Attack Carrier Forces

As shown on Table 7, we plan to maintain 15 attack carriers throughout the programmed period. Tentatively, one new attack carrier, conventionally powered, will be started every second year. The last carrier was included in the fiscal year 1963 shipbuilding program and, tentatively, the next carrier will be started in fiscal year 1965, and another in fiscal year 1967. Thus, by the end of fiscal year 1972, we would have in the Fleet 10 Forrestal-class carriers; one nuclear-powered carrier, the Enterprise; and three Midway and one Essex-class carriers, for a total of 15. By fiscal year 1973, the last Essex-class carrier would be phased out of the force and, by 1974, the last of the Midway-class carriers.

This has been the Navy's program for many years, long before the present Administration took office. Yet, by the time the Midway-class carriers are phased out of the force, one would be 30 years old and two would be 32 years old, clearly demonstrating that the 20-year rule-of-thumb is an artificial standard for measuring the useful life of naval vessels. This point is particularly pertinent to our discussion of the next type of ships.

b. Anti-Submarine Warfare Carrier Forces

While it is clear that new construction will eventually be necessary if we are to maintain the present force of nine ASW carriers, it is not yet at all clear when this program will have to be started. All of the present ASW carriers are of the Essex-class and are still highly serviceable ships on the ASW role, particularly after they have been put through a rehabilitation and modernization program. Additional, more recently built Essex-class carriers will become available for ASW duty as they are phased out of the attack carrier force. These ships, without taxing their capacity, can easily handle any of the aircraft now in use or planned for the ASW operation.

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While it is true that the Essex-class ships, which were all built during World War II, will soon exceed the 20-year mark, there does not seem to be any logical reason why they would not be serviceable in the ASW role for perhaps another 10 years. As I pointed out, the Navy intends to retain the Midway-class ships in the more demanding attack carrier role for 30 years, or even longer. It should also be noted that the new ASW carriers the Navy proposed to build would be both smaller and slower than the Essex-class carriers.

Furthermore, new developments, either in ships or in ASW weapons or techniques, which we can reasonably anticipate during the next six or seven years, may well make possible the design of radically different types of ASW carriers, or may lead to a reduction in the total number required. For example, the successful development of a VTOL aircraft, on which work has been underway for many years, could substantially reduce the size required of an ASW carrier. So, too, the successful design of a destroyer escort equipped with manned ASW helicopters could reduce the number of carriers needed. We are now studying just such a destroyer escort.

Finally, new ASW carriers would cost almost \$200 million each. The Navy estimates that the first ship would run about \$210 million and the following ships \$185 million each, but the \$185 million figure does not provide for future labor and material cost increases which have always occurred in the past. Thus, the cost of these carriers will run to at least \$200 million on the average, or a total of \$1.8 billion for a force of nine carriers. This is not an inconsiderable sum, even in a budget as large as the Defense Department's.

A new ASW carrier would, of course, be superior to an Essex-class carrier in certain respects. The cost of maintenance (normal overhaul, rehabilitation, modernization, etc.) might be less, since by 1970 all the Essex-class carriers would be 25 years old or older. Because a new carrier would be somewhat smaller (35,000 tons compared to 40,000 tons) and would be designed to operate at somewhat slower speeds (27-28 knots compared to 30 knots), the operating costs might also be somewhat lower, and we may find that certain of the electronic and command and control systems cannot, physically, be back-fitted on an Essex-class carrier.

Nevertheless, recognizing that some sort of replacement program will eventually be necessary and that this program too should be phased over a period of years in order to avoid a "block obsolescence" problem in the future, we have tentatively programmed one new ASW carrier at a cost of \$210 million in fiscal year 1976. We will be in a much better position to determine the size and character of the ASW carrier force long before that time arrives.

#### c. Cruiser Forces

We now have a force of 14 cruisers, one of which, the Long Beach, is nuclear-powered. Eleven are armed with one or more of the surface-to-air

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missile systems, TARTAR, TERRIER or TALOS, while the remaining three are armed solely with guns. During fiscal year 1964, an additional cruiser which has been outfitted with TARTAR, TALOS and ASROC will join the fleet, replacing one of the gun cruisers. We tentatively plan to continue this force of 14 cruisers through fiscal year 1967. The two remaining gun cruisers will then be phased out of the force, one each in fiscal years 1968 and 1969. The 12 missile-firing cruisers will continue in the force through fiscal year 1971.

The Navy proposed the construction of six TYPHON-armed cruisers, one each year beginning in 1966. This would permit one cruiser to be deployed at all times with each of the four major fleets to serve as a command ship and to provide air defense. The proposed cruisers would carry a TYPHON air defense system utilizing a very large, [REDACTED] radar, which, because of its bulk, could be installed only in a vessel of that size.

[REDACTED]

There is also the long standing question as to how much it is reasonable to invest simply to defend the Fleet against air attack. By 1971, under our currently proposed programs, there will be about 100 missile-armed cruisers, frigates and destroyer-types, including five TYPHON frigates. In addition, the attack carriers will carry high performance interceptor aircraft. The entire question of the cost and capability of the fleet in relation to the cost of defending it against air attack still requires a most thorough analysis.

The cost of six proposed TYPHON cruisers would exceed \$1.2 billion. Of more immediate concern, however, is the fact that the TYPHON system has slipped considerably in development. This is not surprising since TYPHON is an extremely complex system. We are still having serious difficulties with the TERRIER, TARTAR, and TALOS systems which are much less complicated than TYPHON. In fact we have had to include in our fiscal year 1964 budget request a total of \$37 million to correct existing deficiencies in TERRIER, TARTAR, and TALOS ships built or funded in previous years. The full cost of this correction program is estimated at about \$275 million for the fiscal year 1963-65 period.

This experience has convinced me that full-scale testing of these complex systems is absolutely essential before we start to build the ships in which they are to be installed. Therefore, we now plan to install a [REDACTED] TYPHON system on the test ship, Norton Sound, to perform

[REDACTED]

full-scale test firings. When the results of these tests are known, we shall be better able to make sound decisions on the desirability of installing the system on frigates or cruisers. We believe the smaller [REDACTED] system, which we plan to install on frigates, is more readily attainable. Accordingly, for the time being, we have programmed an additional TYPHON frigate in each year 1966-68 in place of the cruisers.

For all of these reasons, it is entirely premature to program TYPHON-armed cruisers. Since the Navy did not propose to start the first new cruiser until fiscal year 1967 we have ample time to review thoroughly all aspects of the problem.

d. Destroyer and Escort-Type Ships

There are now 266 destroyer-type ships in the Navy General Purpose Forces including 17 frigates, 217 destroyers and 32 escorts. For end fiscal year 1964, we have programmed a force of 258 ships of this type.

During the coming fiscal year, three more guided missile frigates will join the fleet, raising the total to 20 and leaving only three gun frigates in the fleet by the end of that year. As shown on Table 8, we have programmed one nuclear-powered TYPHON frigate in fiscal year 1965, two conventionally-powered frigates in 1966, three in 1967 and two in 1968. All of the gun frigates will be phased out by 1966 and converted to guided missile frigates or guided missile destroyers. Thus, by fiscal year 1971 we plan to have a total of 36 guided missile frigates, three of which will be nuclear-powered.

We have not programmed any guided missile frigates for 1964. The DLGN in the fiscal year 1963 program and the two DLG's shown for 1964 in the program presented to this Committee last year were to be armed with the TYPHON air defense system. Because of the slippage of the TYPHON development, we were forced to cancel the 1963 DLGN as well as the two DLG's planned for 1964. We believe the program is now proceeding satisfactorily and, allowing time for the Norton Sound tests, we should be able to start the DLGN originally planned for 1963 in 1965. We would then start the two TYPHON DLG's originally planned for 1964 in 1966. Of the \$190 million provided in the 1963 appropriations, \$121 million will be used in this fiscal year for TARTAR, TERRIER, and TALOS improvements on ships currently under construction. The balance has been reprogrammed to make up shortages in other ships under construction, and to reduce our 1964 budget request.

The destroyer force will gradually decline from 207 at end fiscal year 1963 to 120 by end fiscal year 1971, as the number of frigates and escorts increases. During the coming fiscal year five DD-931-class ships built after World War II and two of the older and smaller gun frigates will be converted to TARTAR-armed guided missile destroyers. Fifteen more DD conversions are planned for 1965. In addition, nineteen 2,200-ton-class destroyers will be put through major rehabilitation and



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modernization in 1964, completing the program of converting all those World War II destroyers which because of their size and condition would still be adequate in the early 1970's.

The number of destroyer escorts is programmed to increase from 33 at the end of the current fiscal year to 96 by 1971. Ten of these ships are included in the 1964 budget and 53 more in the 1965-68 program, as shown on Table 8.

We do not plan to start any more guided missile escort ships (DEG), although we had planned to add more of these ships in the program presented to the Committee last year. The cost of the DEG has risen so rapidly that it has now priced itself out of the program. The DEG's in the 1962 program, for example, were estimated to cost about \$31 million each, about \$6 million more than a regular escort (DE). This year the Navy estimates that a DEG would cost about \$39 million, \$11 million more than a DE. Since the DEG has only one TARTAR launcher, the additional air defense capability which that launcher would provide would hardly be worth the \$11 million cost differential. But even more important, the substantial increase in the number of guided missile destroyers will fully meet the Navy's requirement for missile ships of the destroyer and escort classes. Therefore, all future escort-type ships might best be specialized in the ASW role.

Seven more DE's of the type now being constructed are programmed for 1965, plus one new type escort specially designed "from the keel up" for anti-submarine warfare. This ship, included in the 1964 R&D program, is still in the concept stage and the Navy has yet to develop the specifications. Generally, the new type would be faster and possibly somewhat smaller than those presently being built. By carefully integrating the electronics, sonar, armament and ship control into a single system, the Navy believes that the manning requirement could be reduced below the current class of DE's. Because of the urgency of the ASW mission, and the promise held forth by the new concept, we have programmed the first of these ships in 1965, even though the detailed characteristics are still to be worked out.

Although we are planning to build additional large numbers of escorts in 1966, 1967, and 1968 as shown on Table 8, we are still quite uncertain as to the specific types. In addition to the ASW escort I just described, the Navy has also proposed another new type which would be capable of carrying a manned ASW helicopter - a development I alluded to in my discussion of the ASW carriers. Again, this ship is still only a concept, but its successful realization would provide a very important new ASW capability to the Fleet. Thus, the composition of the escort construction program after 1965 will depend upon the progress we make in working out these new concepts. But we are all agreed that a substantial number of new escorts must be built if the ASW capabilities of the Navy are to keep pace with the growing submarine threat.

[REDACTED]

If the program I described is carried out, we would have 252 frigates, destroyers and escort ships by the end of fiscal year 1971, of which 173 will have joined the fleet since the Korean war and the balance will have undergone major rehabilitation and modernization after 1960.

e. Small Patrol Craft

Recent experience in counter-insurgency situations has demonstrated the need for small, fast patrol craft, capable of maintaining coastal security and providing support to para-military operations on an economical basis. Two proto-type motor gun boats (PGM) were included in the 1963 program. We now propose to build another 22 boats of this type at the rate of six each in 1964 and 1965 and ten in 1966. The new PGM's will have sufficient speed, endurance and armament to replace escort and mine warfare ships now performing the coastal surveillance and counter-insurgency support missions. The cost of the PGM is estimated at about \$3 to \$3 $\frac{1}{2}$  million each, a fraction of the cost of a DE.

Including two torpedo boats purchased from Norway and two reactivated World War II PT boats, the Navy will have a force of 28 patrol craft.

f. Attack Submarine Force

By the end of the current fiscal year, the submarine force, excluding POLARIS and REGULUS, will number 103 ships, including 19 nuclear-powered. The total number will remain relatively stable over the programmed period, rising to 105 by 1966 and remaining at that level through 1971.

In the attack submarine program presented to the Committee last year, we had planned to start six SSN's in 1964 and eight each year, 1965 through 1967. We still propose to start six in 1964, but we now believe that six SSN's a year, 1965 through 1968, will meet our most urgent submarine requirements. We still have in the Fleet a substantial number of conventionally-powered submarines which were built at the end of World War II or later.

Twelve of the conventionally-powered submarines were delivered to the Navy during or after the Korean war. These ships, with a major modernization during the 1967-68 period, should be serviceable well into the 1970's. Twenty-three submarines built at the end of World War II can also be modernized and, indeed, nine have been already. We now propose to modernize the remaining 14 by giving them the same type of sonar and other detection gear installed in the pre-THRESHER class nuclear-powered attack submarines and doubling their battery capacity. With these modifications, we believe these submarines will be serviceable through the early 1970's.

Thus, by the end of 1971 we would have 66 nuclear-powered, 35 modernized conventional and 4 unmodernized conventional powered attack

[REDACTED]

submarines, or a total force of 105. Under an alternative program of eight SSN's per year which was considered, we would have had by that date only seven more nuclear-powered submarines but 26 fewer modernized conventional powered submarines. Considering the force as a whole, I believe the program we are now proposing will provide a comparable capability. Moreover, our proposal would provide a rate of construction more commensurate with the size of the force to be maintained, i.e., it would be sufficient to replace the force completely every  $17\frac{1}{2}$  years.

g. Mine Warfare Forces

The mine warfare force which we now propose for the fiscal year 1964-68 period is essentially the same as presented to the Committee last year. In fiscal year 1964, we plan to convert another mine counter-measure support ship (MCS) and in the years 1966-68, we plan to construct 16 new ships.

h. Amphibious Ships

Two years ago we substantially increased the amphibious lift capacity from a  $1\frac{1}{2}$  division/wing (assault element) to 2 division/wings, and increased the number of ships from 110 to 131. We now plan an amphibious force of 134 ships for the end of the coming fiscal year. As new and more capable amphibious ships become available, this number will gradually decline to about 109 by 1968 and to about 102 by 1971.

We propose during the 1964-1968 period to continue the construction of LPD's, four each in 1964 and 1965, three each in 1966 and 1967, and two in 1968, for a total of twenty-four. These are high-speed ships capable of landing troops, heavy equipment and cargo over the beach by means of embarked landing craft. They also have a limited helicopter capability.

To provide a major helicopter capability we will continue the construction of the LPH's (amphibious assault ship), a fast, high-capacity troop carrier with facilities for large-scale helicopter operations. The first of these was authorized in 1962 and the second in 1963. We have programmed two more in each year, 1965 through 1968.

We plan to initiate in the coming fiscal year a new program for the replacement of World War II LST's (landing ship, tank) with the first new LST, a fast "across-the-beach", amphibious transport that can carry amphibious vehicles, tanks and other heavy equipment, to be started in 1964. Two more will be started in each year, 1966 through 1968. In 1966 we plan to begin a new program to replace the World War II LSD's (landing ship dock), two in that year, two in 1967 and one in 1968. And in 1965 we will begin the construction, at the rate of one a year through 1968, of AGC's, amphibious force command ships.

[REDACTED]

In total, these programs will go a long way toward modernizing the amphibious lift force.

i. Logistic Support Auxiliary Ships

We are proposing for 1964 a total of 212 auxiliary support ships, about the same number as we have at the present time. This force will decline gradually to about 194 by 1968 and 184 by 1971 as new and more efficient ships are introduced into the fleet. Our proposed 1964 shipbuilding program includes an AOE and an AFS (fast, underway replenishment ships), as well as three AO (JUMBO) oiler conversions and three AE (ammunition ship) conversions. We are also proposing the construction of one major fleet support ship and the conversion of another. During the 1965-68 period, we have tentatively programmed the construction of 44 new logistic support ships and the conversion of 15 others.

The Navy asked that we consider the construction of nine AOR's (new fleet replenishment tankers) during the 1964-68 period. These vessels, though primarily oilers, would also carry ordnance, general cargo and refrigerated cargo, in addition to petroleum products. The Navy also suggested the conversion of six more AO's to the JUMBO configuration, entailing a major modernization and renovation. The center section of the ship, which contains the tankage space, is replaced by a new section which is about 90 feet longer. As a result, petroleum capacity is increased from 100,000 to 150,000 bls and space is provided for a limited amount of non-refrigerated cargo.

After carefully considering the alternative proposal, we are recommending the conversion of 16 AO's to the JUMBO configuration during the 1964-68 period instead of 6, and the deferral of AOR construction for the time being.

The conversion of an AO costs slightly less than half as much as a new AOR (\$18.3 million versus \$40 million) and has about half the expected useful life (10 to 15 years versus 20 to 30 years). We believe that this plan will provide a sufficient interim modernization of fleet oiler capacity to permit the AOR construction program to be deferred until about fiscal year 1970 when the peak replacement requirements for other types of World War II construction ships will have been passed.

j. Landing and Service Craft

Also proposed in the 1964 budget is \$15 million for landing and service craft, the same amount provided in 1963. We have tentatively programmed the same level of funding for this purpose through 1968.

k. Naval Reserve

In addition to the large number of still useful ships in the "moth-balled" fleet, the Navy also supports a Naval Reserve force of 40 ASW

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destroyers and escorts, and 12 mine warfare vessels in a ready-for-sea status. These ships are shown at the bottom of Table 7. The 40 destroyer-type ships and their reserve crews were ordered to active duty during the Berlin crisis. While on active duty many of the ships were overhauled and new equipment was installed, and their state of readiness improved.

## 2. Marine Corps Forces

The present Marine Corps force of three divisions and three air wings and supporting units manned by 190,000 active duty military personnel will be maintained throughout the programmed period. Within this force are personnel being trained to constitute a nucleus of the 4th division/wing team. This team could be formed very quickly by calling up the Organized Marine Corps Reserve, which has recently been realigned to fulfill better this requirement.

Until quite recently the mission of the Marine Corps Reserve was to provide individual replacements for the active force. The organized units in the Reserve were for training purposes only. In the event of a mobilization, regular personnel would be taken from the three active division/air wings to form the skeleton of the fourth division/wing, with the trained reservists making up the balance. This method, however, tended to reduce the readiness of the active divisions and required lengthy unit training for the new division.

Under the new plan, the Marine Corps Reserve is divided into three categories:

1. Units required to make up the fourth division/air wing. These units can be mobilized in a matter of weeks.
2. Those combat support and service units required to back up the fourth division/air wing.
3. Training units to provide individual replacements.

All reservists in these three categories will be afforded regular paid drill and summer training. There will also be a number of Marine Reservists who participate in two weeks annual active duty training only, who would be available as individual replacements.

The fourth division/air wing headquarters and the headquarters elements of the regiments and air groups are in the active forces. All other elements of the division/air wing are included in the Marine Corps Reserve. The Reserve battalions, as well as every other Marine Reserve unit, have regular commissioned and non-commissioned officers who serve as advisors. These regular personnel will accompany their Reserve units upon mobilization. Additional regular personnel, primarily technicians, would be added to the fourth division/air wing upon mobilization, up to about 10 percent of the total strength.

[REDACTED]

All the Marine Corps Reserve units will be furnished sufficient equipment for training. The remainder of the equipment required for mobilization will be maintained in depots ready for immediate issue.

The realignment eliminated 15 company-size units which were located too far from suitable training facilities to enable them to maintain necessary combat skills or had too few qualified personnel. These deactivations permitted the regular personnel assigned to be used for higher priority duties. The drill pay spaces were allocated to units making up the division/air wing and its supporting forces.

### 3. Navy and Marine Corps Operating Aircraft Inventories

At the end of the current fiscal year the general purpose forces of the Navy will have a total operating inventory of about 3,200 combat and combat support aircraft, and the Marine Corps about 1,150, as shown on Table 9. About the same number will be maintained through 1964. The Navy inventory will gradually decline to about 3,000 aircraft by 1968. This is accounted for by a reduction of almost 100 support aircraft and the introduction of more effective combat aircraft. However, the Marine Corps inventory will increase to about 1,200 aircraft by 1968 as the vertical envelopment capability is expanded.

In addition, as shown on Table 9, the Naval and Marine Corps Reserves will have a total of 820 operating aircraft at the end of 1964. This number will increase slightly to about 830 by the end of 1968.

### 4. Navy and Marine Corps Aircraft Procurement

To continue the modernization of the aircraft inventories of the Navy and Marine Corps, we propose to buy almost 700 aircraft of all types in fiscal year 1964. This is fewer than we had estimated for 1964 in the five-year program presented to you last year and fewer than the number we plan to buy during the current fiscal year.

Further study of Navy and Marine Corps aircraft requirements is urgently needed. In our review of the requirements, we found, in several cases, that new aircraft scheduled for procurement were only marginally better than the ones they were to replace, and, in still other cases, the numbers planned for procurement exceeded the requirements. In view of these differences, I have requested a comprehensive study of the entire aircraft requirements problem. The procurement program shown on Table 10, for 1965 and beyond, therefore, should be considered highly tentative.

To meet the fighter requirement for both Navy and Marine Corps, we are now buying the F-4B (F4H), a high performance fighter, especially effective in the air superiority role. With the F-4B, we plan to replace over a period of time the older F-8 (F8U), the latest model of which will continue to be delivered to the forces as late as 1965.

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In examining the requirements for the F-4B more closely, we found that:

- (a) The Navy had planned to start phasing out F-8's from the active forces some time before the completion of their useful life and had computed the original requirement on that basis.
- (b) The proposed replacement training requirement for the F-4B is appropriate for the present, when virtually all of the pilots lack experience in the F-4B. The current training aircraft factors, however, were proposed for the later years when many of the pilots will have served a prior tour flying the F-4B and therefore will require only a brief orientation before joining a combat unit. In the later years the relationship of F-4B's in training squadrons to those in combat squadrons should be reduced and that has been done in our program projections.
- (c) The Navy procurement objective included F-4B's for the Reserves. However, we feel that with aircraft such as the F-8 (F8U) available in large numbers in the coming years, procurement of new aircraft for the Reserves cannot be justified.

For these reasons, we now plan to buy 132 F-4B's in 1964 and 1965, instead of 150 as originally planned for each year, and continue this rate of procurement through 1968. In 1966, we plan to buy the first F-111's (TFX) for the Navy and Marine Corps as eventual replacements for the F-4B's. Deliveries are expected to begin in 1968.

For the attack role, we are now buying two types of aircraft, the A-4E (A4D-5) and the A-6A (A2F-1). The A-4E is a subsonic, light attack, close support aircraft which can carry either conventional or nuclear weapons. The A-6A is another subsonic aircraft which is especially designed for low level bombing of moving targets at night and in bad weather.

The A-4E is only marginally better than the A-4C (A4D-2N), the last of which are being delivered to the Navy this fiscal year. Consequently it does not seem wise to make any very large commitments to that aircraft during the next few years. Instead, we plan to retain the older A-4C's in the inventory somewhat longer than we had originally planned, and thoroughly review the attack aircraft requirement during the coming months with a view toward the possible initiation of a new attack aircraft development in the next year or two. Meanwhile, we propose to reduce our procurement of the A-4E to 120 in 1964, instead of the 240 indicated last year, and we tentatively plan to continue this rate through fiscal year 1966. The 1963 buy has also been reduced, from 240 to 180, the same number we bought in 1962.

With regard to the A-6 (A2F-1), the future mission requirements for this close support aircraft to operate from attack carriers is far from

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clear. Before making a final decision on this part of the A-6A procurement program, I believe we should investigate the possibility of substituting a higher performance aircraft which would have better survivability in the late 1960's. We will, however, go ahead with the procurement of this aircraft in 1964, and if we later decide not to place them on carriers, they can be used to meet the Marine Corps requirement. Therefore, for 1964 we propose the procurement of 48 aircraft, about the same number as we planned last year.

We have also revised the procurement programs for the Navy and Marine Corps reconnaissance forces. Last year we had planned to buy (over a period of three years) 100 A3J-3's, a combination attack and multi-sensor aircraft, now redesignated as the A-5C. Inasmuch as the attack mission of the A3J is being increasingly taken over by POLARIS and other strategic missiles, we now plan to modify 50 A3J attack aircraft, already in the inventory, to the dual attack/reconnaissance configuration, thereby reducing the total new procurement requirement for the A-5C by about the same number.

We also propose to buy 12 RF-4B's, the reconnaissance version of the F-4B fighter, in 1964 for the Marine air wings and plan to buy more in 1965. The RF-4B has a day and night photo capability as well as radar and infrared sensors. By the late 1960's, we expect to begin procurement of the reconnaissance version of the F-111 (TFX).

The EA-6A (A2F-1H) countermeasures aircraft, the procurement in quantity of which we had intended to initiate this year, is now being restudied. Twelve of these aircraft were included in the 1963 program and 12 more are included in the 1964 budget. However, neither quantity will actually be procured until we have investigated the possibility of modifying the A-6A (A2F) attack aircraft to give it an adequate countermeasures capability. But in either case the funds requested will be needed.

For the Fleet Air Early Warning mission, we plan to procure the carrier-based E-2A (W2F-1). The same airplane was to be used by the Marine Corps for airborne radar surveillance. However, the aircraft's detection capabilities over land and its effectiveness in the Marine Corps tactical role are yet to be established. Accordingly, pending further study of the Marine Corps need, we plan to buy this aircraft for carrier use only, thus reducing the numbers to be procured during the programmed period.

For the ASW forces we propose to procure several different models, including the S-2E, a carrier-based, long-range search aircraft. The numbers we had programmed last year for procurement during the 1963-67 period included some for the Naval Reserve. We now believe that the search aircraft already in the inventory, and which will be phased out as the S-2E's are delivered, will be fully adequate to meet the Reserve



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requirements. We also found that the numbers we had programmed were excessive in relation to the ultimate operating inventory for this aircraft.

The principal ASW helicopter is the SH-3A (HSS-2). This carrier-launched helicopter can detect, track and destroy enemy submarines. In 1964, we propose to buy 36 SH-3A's and to increase our procurement to 48 per year in 1965 and 1966. This is somewhat fewer than we had programmed for this period last year. However, further analysis indicated: (a) that the SH-34G (HSS-1) helicopter now in use could be retained longer than originally planned; and (b) that the original requirement included helicopters for the Naval Reserve even though sufficient quantities of the SH-34G would become available for their use.

We also plan to continue to procure the P-3A (P3V-1) shore-based ASW patrol aircraft at the rate of 48 per year, 1964 through 1968. This turbo-prop aircraft is far more productive than the older P-2H (P2V) which it is replacing since it has much greater speed, range, endurance, and capacity for detection equipment.

Also included in the 1964 program are 4 C-2A (W2F COD) combat support transports (financed with RDT&E funds), 60 CH-46A (HRB-1) and 16 CH-53A assault helicopters used by the Marines for the vertical assault mission, 48 UH-1E (HU-1E) utility helicopters, and 87 trainer and support aircraft.

In all, we plan to procure 681 aircraft for the Navy and Marine Corps, at a cost of \$2.0 billion, compared with 788 aircraft at a cost of \$2.2 billion in 1963.

#### 5. Other Navy Procurement

The logistics objective for the Navy in 1964 is to acquire sufficient stocks to support six months of combat consumption with an average of two-thirds of the force committed to combat. More specifically, we propose to provide ship fills and initial equipment allowances for the active fleet and for selected reserve ships, plus 90 days of combat consumption for the active fleet and high readiness reserve ships (category ALPHA - 45 ships), and 30 days for other selected reserve ships (category BRAVO - 185 ships). However, with respect to anti-aircraft missiles, the quantities provided have been adjusted to conform to the estimated number of aircraft targets that might be engaged.

With regard to Naval aviation, our objective is to provide initial allowances and four months of combat consumption for the active and selected reserve forces, i.e., sufficient stocks to permit six months combat consumption for two-thirds of the force.

To achieve these materiel objectives, we are requesting about \$830 million for Navy missiles, ordnance, ammunition and other combat

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consumables - an increase of about \$80 million over the amount provided last year. The Navy's proposed 1964 air-to-air missile procurement program includes 1,400 SPARROW III and 1,483 SIDEWINDER IC.

As I mentioned previously, the Navy continues to experience difficulties with the TARTAR, TERRIER and TALOS air defense systems. Until these difficulties are overcome, we plan to hold production of these missiles to the lowest feasible level, taking into account missiles required to outfit new ships, training requirements, etc. Production rates will be adjusted as soon as the deficiencies are corrected. Accordingly, we propose to procure in 1964 480 TARTAR, 412 TERRIER, and 94 TALOS missiles, about half the number programmed for the current fiscal year.

BULLPUP tactical air-to-surface missile procurement will total 7,000 (including 3,500 of the more powerful B model) in 1964 (at a cost of \$7.2 million) compared with 5,200 in 1963 and 7,589 in 1962. Another \$7.1 million is provided for the procurement of BULLPUP trainer missiles.

The 1964 program also includes increased quantities of modern bombs, ammunition, torpedoes, ASW sonobuoys, electronics and communications, training devices, etc. One of the principal items is \$29 million for 1,900 MK-44 torpedoes which will raise our readiness position on this item to about 50 percent of the inventory modernization objective. Thirty-two million dollars is included for the first substantial procurement of the new MK-46 torpedo, which has greater speed, range, and depth capacity than the MK-44. Another major item is the CBU and SADEYE bombs for which \$35 million is requested for 6,000 units, raising our readiness position on this new item to over 40 percent of the modernization objective. Funds are also requested for large quantities of other bombs, ASROC rockets and depth charges, sea mines, 2.75 mm rockets and ammunition of various types.

The Navy electronics procurement program will increase in fiscal year 1964, reflecting for the most part the greater emphasis being given anti-submarine warfare. The largest item is \$87 million for equipment for the SOSUS submarine detection and tracking system. Funds are also included for 137,000 JEZEBEL and 111,700 JULIE sonobuoys raising our inventories of these items to well over 90 percent of the modernization objectives, respectively.

Another large dollar item is the Naval Tactical Data System, a general purpose command and direction system for fleet use. This computerized system will be used to control the air and sea battles, including the destruction of hostile submarines. Other electronics items include sonar, radios and radars, electronic countermeasures equipments and equipment to meet cryptographic and intelligence requirements.

#### 6. Marine Corps Procurement

Our logistics objective for the Marine Corps ground forces is to procure sufficient materiel to equip and sustain the four divisions in

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combat for six calendar months - a total of twenty division months of combat consumption. For the Marine Corps air wings, our objective is sufficient materiel to equip and sustain all four wings in combat for 6 months with two-thirds of the force engaged - a total of 16 months of combat consumption.

The 1964 procurement program includes an increment of 35,400 M-14 rifles. Eleven million dollars is requested for 7.62 mm ammunition and about \$57 million for other ammunition including 80,000 105 mm and 104,000 155 mm artillery rounds and various types of chemical ammunition. Four hundred HAWK air defense missiles will be purchased in 1964, raising the total to about 90 percent of the modernization objective.

Another 22 M-48 series tanks and 8 M-67 flame-thrower tanks will be retro-fitted under this budget, completing the modernization of the Marine Corps' tank inventory. A number of tactical vehicles will also be procured, including 1200 1/2-ton "Mechanical Mules" and additional 1/4-ton, 3/4-ton, and 2-1/2-ton trucks.

In the electronics category the Marine Corps will buy, in 1964, a variety of radar, radio, and other communications and electronics equipment. The largest item is the helicopter transportable Marine Tactical Data System (MTDS), an integrated and semi-automated system used to direct air defense operations from the beach after an amphibious assault. Each division/wing will have one MTDS which will control both the interceptors and ground-to-air missiles such as HAWK. The Marine Tactical Data System can be tied into the Naval Tactical Data System to be used by the fleet commander as well as the tactical air control systems controlled by the Army and the Air Force, thus ensuring that all air defense functions in an area can be fully coordinated.

#### D. AIR FORCE GENERAL PURPOSE FORCES

The General Purpose Forces of the Air Force include the tactical fighters, bombers and reconnaissance aircraft, tactical missiles, interceptor aircraft deployed overseas, and, until 1965, a small number of KB-50 tankers. The tankers are being phased out and the tactical fighter refueling mission is being assumed by the SAC tanker force.

Our principal concern in this area during the last two years has been the urgent need to build up adequate air support for the Army ground forces so that they could engage, if needed, in a sustained non-nuclear conflict. As I noted in my discussion of the General Purpose Forces studies, superior tactical air power is essential to our position in Europe and would be of great importance in local war situations in other parts of the world where our forces might be involved. A re-examination of our tactical Air Force program in the light of the more recent requirement studies has convinced us that these forces must be further strengthened over the next few years.

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There are four major elements involved: (a) the size of the forces; (b) the rate of modernization; (c) the level of consumables for sustained operations, including inventories of new, high performance conventional munitions; and (d) protection of the forces against air attack. To achieve maximum results, all four must be brought up to a new level in balance with each other. There would be little to gain, for example, by increasing the size of the tactical fighter force without providing adequate support for sustained operations.

#### 1. Tactical Fighter Forces

By the end of the current fiscal year, the Air Force will have a force of 21 wings with 1,518 tactical fighters, 5 wings and 300 aircraft more than it had at the end of 1961. As shown in Table 11, the present force is equipped with a variety of fighter models, ranging from the old F-84 to the new F-105. We also have a small number of B-57 tactical bombers which will be phased out of the force during 1965. The increase from 16 wings at the end of 1961 was accomplished primarily by holding in the active force the F-84 aircraft brought in by the Air National Guard during the Berlin crisis, and, to a lesser extent, from the delivery of additional F-105's.

Last year we had planned to make our final procurement of the F-105 and begin the procurement for the Air Force of a total of about 700 F-4C's, the Navy-developed F4H. That program would have given us a 21-wing tactical fighter force by 1966 of seven wings each of F-100's, F-105's, and F-4C's. This force does not now appear to be adequate for the period ahead. In determining what changes should be made, we considered a number of different alternatives. One of these was to increase the tactical fighter force to 25 wings, through the procurement of the F-104 as an interim aircraft. While a 25-wing force might yet be needed in the latter part of the 1960's, we do not believe that the F-104 would add much to our combat capability because of its limited range, and conventional ordnance capacity. Rather, our analyses indicated that from a cost/effectiveness viewpoint we would get the greatest increase in combat capability from a more rapid modernization of the present 21-wing force. We can decide later, depending on how the future threat develops, whether a further increase to 25 wings is required.

Accordingly, we are now proposing a very substantial increase in F-4C procurement. Instead of buying about 700 aircraft over a four-year period, 1962 through 1965, we now propose to buy a total of about 1,350 aircraft over a five-year period, 1962 through 1966, as shown on Table 12. This program would give us a force of 14 wings of F-4C's and, depending upon how soon the F-111 (TFX) enters the force, six or seven wings of F-105's by end 1968. The F-100's, under this program, would be phased out of the active force two years sooner than we had planned last year, and the F-105's phased out as the F-111's become available. In turn, the Air

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National Guard will be significantly strengthened by the more rapid replacement of older aircraft.

The revised program will give us a very significant increase in combat power. The F-4C can carry a much larger load of conventional ordnance, is considerably faster, and has a much longer range than the F-100. Moreover, the F-4C can operate from runways of less than 5,000 feet, half that required for the F-100.

Thirty F-4B/C's were procured for the Air Force in 1962 and 307 (27 more than originally estimated) are now planned for procurement during the current fiscal year. The additional 27 F-4C's, which we intend to finance through reprogramming, will replace the first 27 Navy configured aircraft delivered to the Air Force last year for test and training purposes. These aircraft will be sold to the Navy during the 1964-1965 period as the Air Force receives deliveries of F-4C's. For 1964, we propose to buy an additional 343 F-4C's at a cost of \$755 million.

The procurement schedule for the F-4C has been phased to mesh with the procurement of the new F-111 (TFX). The development contract for this aircraft was placed late last year after a most thorough analysis and refinement of design proposals. We believe this aircraft, with its variable geometry wing and turbo-fan engines, will add a new dimension to our tactical air power. The F-111 should be capable of speeds of Mach 2.5 at altitude and sustained sea level penetration speeds of Mach 1.2. This aircraft should carry up to twenty-six 750-pound bombs, as well as mixed ordnance loads of most available types of weapons. It will operate from unpaved landing strips of 3,000 to 4,000 feet in length. It should be highly efficient in all tactical and air defense missions for either limited or general war, and because of its long ferrying range and refueling capabilities it will be capable of rapid deployment to all parts of the world. About \$127 million has already been provided for the development of this aircraft and another \$233 million is included in the 1964 budget request. In addition, \$64 million is included for development of the fire control and missile system.

## 2. Tactical Reconnaissance Forces

We now have 14 tactical reconnaissance squadrons equipped with about 230 aircraft - RF-101's and RB-66's. Last year we had planned to phase out the RB-66's, beginning in 1964, and replace them with RF-4C's and, by 1966, we had planned to replace two of the RF-101 squadrons with the RF-4C giving us a 14 squadron force - 6 RF-101's and 8 RF-4C's.

Our re-examination of this program has led us to the conclusion that the force planned last year would not be adequate to meet the combat requirements of the 1966-68 period. Our ability to acquire tactical targets lags behind our ability to destroy them. Moreover, the Soviet Union's air defense capabilities are expected to increase significantly over the

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next few years and we now believe that a larger number of modern high-performance tactical reconnaissance aircraft will be required to sustain the attrition rates which must be expected in that time period. Accordingly, we now propose to expand the tactical reconnaissance force to 20 squadrons by increasing the procurement of RF-4C's so that, by the end of fiscal year 1967, we would have 14 squadrons of RF-4C's and 6 squadrons of RF-101's, or a total of 360 aircraft. Twenty-six RF-4C's have been funded through 1963. Another 129 aircraft at an estimated cost of \$341 million are included in the 1964 budget, an increase of 31 aircraft over the number originally planned last year. The remaining 164 aircraft are programmed for 1965.

Tentatively, depending upon the development program, we will begin to buy a reconnaissance version of the F-111 in 1966 to start the replacement of the RF-101 and RF-4C.

We considered a proposal to increase the tactical reconnaissance force to 20 squadrons in fiscal year 1964, by transferring 6 squadrons of Air National Guard RF-84 aircraft to the active forces and holding them in the force through fiscal year 1965 when they would be replaced by RF-4C's. Since the Air National Guard RF-84 squadrons can be ready for deployment within a few hours after being alerted, we see no significant benefit to be gained by transferring the aircraft to the active forces. In fact we would simply complicate an already difficult problem of providing sufficient aircraft to enable the reserve units to continue their training. Consequently, we have decided to leave the RF-84's in the Air National Guard.

### 3. Interceptor Aircraft

The Air Force general purpose forces also include about 270 F-102 interceptors deployed overseas. These aircraft provide air defense for installations and weapon emplacements behind the battle areas as well as maintain air superiority over the battle area. We plan tentatively to maintain this force through 1968, although the number of aircraft will gradually decline through normal attrition to about 200 by the end of the period. However, the rapid buildup of the multi-purpose F-4C's in the tactical fighter forces during the next few years will greatly increase our air-to-air combat capabilities.

### 4. Tactical Missiles

We now have five MACE-A and one MACE-B tactical missile squadrons deployed in Europe, and two MACE-B squadrons deployed in Okinawa. Only the MACE-B missiles are deployed in a hardened mode. Although both the A and B MACE missiles are vulnerable to a surprise attack, they do provide a potentially important nuclear delivery capability and at a very small additional cost. Therefore, we propose to maintain these squadrons through 1968.

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As I mentioned earlier, we now have in the R&D program a Mobile Mid-Range Ballistic Missile which is in the initial stages of development. This solid-fueled missile with a range of 2,000 miles, would fill the "range gap" in our present missile programs between the 400-mile PERSHING on the one hand and the 2,500-mile POLARIS and 5,000-mile ICBM's on the other. We anticipate that the MMRBM would carry a nuclear warhead and would be extremely accurate, using new advanced guidance techniques now under development. Because it could be deployed in a mobile mode, either at sea or on land, it would present a difficult target for Soviet missiles.

#### 5. Air National Guard Forces

The Air National Guard tactical forces, at the end of fiscal year 1963, will consist of 19 fighter squadrons and 13 reconnaissance squadrons -- a total of about 500 aircraft. The number of Guard aircraft will increase to over 700 during 1964 and 1965 as the F-84's are phased out of the active forces.

Beginning in 1965 the Air Guard will also begin receiving substantial numbers of modern "century" series fighters. As F-4C's and additional F-105's are delivered, the Air Force will phase the F-100's out of active service and turn them over to the Guard, together with some F-101's and F-104's. By the end of fiscal year 1966, the Guard will be equipped entirely with "century" series aircraft with a total of 22 squadrons with over 500 fighter aircraft and will be able to provide a very substantial augmentation to the active Air Force.

As I noted earlier, when the Air National Guard units called up during the Berlin crisis were released from active duty, most of the F-84 aircraft were retained in the active forces. Prior to the call-up twelve Guard squadrons had been equipped with F-84's. Six are now equipped with a combination of F-84's and T-33 trainers, and the other six have been equipped with F-86's, F-100's, and RF-84's. Sufficient aircraft have been provided to ensure that the Air National Guard fighter units will be able to maintain their skills.

The Air National Guard also provides 13 squadrons of reconnaissance aircraft which would support the tactical fighter units if called to active duty. This force will be reduced to 12 squadrons in fiscal year 1966 and will be maintained at that level through the program period. The Guard will also continue to support three squadrons of KC-97 tanker aircraft for in-flight refueling training.

#### 6. Other Air Force Procurement

Our tentative long-range logistics objective for the Air Force general purpose forces is to acquire sufficient stocks of ordnance and

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other consumables to permit the forces to engage in sustained non-nuclear conflict until production has caught up with combat consumption. However, as I noted last year, the Air Force stocks of modern ordnance were so inadequate that we have had to establish a series of intermediate steps toward this objective.

The first step, which is to be accomplished with 1964 and prior year funds, would, with one exception, bring Air Force stocks up to 90 days of combat consumption by the end of fiscal year 1965, assuming two-thirds of the force were engaged at any one time. The exception pertains to the new CBU-type bombs for which an interim objective of 60 days supply at combat rates has been established.

The second step, which we tentatively plan to finance during the 1965-68 period, would raise all Air Force stocks to six months of combat consumption, again assuming two-thirds of the force engaged at any one time.

We have included in our 1964 budget request a total of \$371 million for tactical non-nuclear ordnance and other consumables, compared with \$304 million for 1963 and \$294 million for 1962. Only about \$50 million was provided for non-nuclear ordnance in 1961. The 1964 procurement program provides a total of 8,400 BULLPUP missiles. Funds are also included for another large increment of BULLPUP trainer missiles. Other missiles proposed in the 1964 program are the SHRIKE anti-radar missile and the SPARROW air-to-air missile. The largest single item in the program, about \$100 million, is for modern CBU-type bombs, including the first procurement of the new CBU-3A anti-tank munition. Also included are a large quantity of fire bombs, as well as a variety of war consumables, such as pylons, fuel tanks, engine starters, etc.

#### 7. Tactical Air Shelter Construction

One of the most urgent problems which has emerged from our General Purpose Forces studies is the vulnerability of our deployed tactical aircraft to surprise enemy attack. This vulnerability is particularly severe in the European area where our units are concentrated on a relatively few airfields.

While there is no practical way to protect our aircraft on the ground against large-scale nuclear attack, we believe that it is both feasible and cheap to give them a large measure of protection against non-nuclear attack. A preliminary study of this problem indicates that a suitable earth-covered steel shelter with a protected entrance could be constructed for about \$90,000 per aircraft.

A total of about 1,000 aircraft shelters would be needed world-wide, about half of them in Germany, France, Netherlands, and England, the most critical areas. Next in importance would be 80 aircraft shelters



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in Korea and Formosa. The balance of about 400 shelters would be needed in less critical areas such as Italy, Turkey, Japan, Philippines, etc.

Pending a more detailed study of the world-wide requirement, we believe that work should be started as soon as possible on the higher priority requirements totaling something over 615 shelters. Accordingly, we have included in the 1964 budget \$30 million which would meet about one-half of the higher-priority requirement. The balance of the higher-priority requirement could be financed in 1965.

All of our war-gaming indicates that in a non-nuclear war situation, this measure would contribute much more to our combat power per dollar invested than additional aircraft or more modern aircraft.

#### E. TACTICAL EXERCISES

Our General Purpose Forces can be maintained in a high state of combat readiness only if they are able to conduct frequent, realistic training exercises in which all elements of our tactical forces - regardless of Service - take part.

During the current fiscal year, the Strike Command (STRICOM) will conduct four large-scale field exercises involving division to corps-size Army forces, the associated airlift and the close air support provided by the Tactical Air Command. In addition STRICOM will conduct seven augmentation, eight operational and eight "no notice" exercises. For fiscal year 1964, STRICOM has five large-scale, eight operational and seven augmentation exercises on its schedule. In addition, they plan to conduct 18 "no notice" exercises. Unlike most large-scale exercises which involve months of prior planning by all the participants, the "no notice" exercises simulate realistic crisis situations. The units, usually of division size, are alerted, loaded, and deployed or air-dropped to the exercise area in a very short period of time. The Commander of STRICOM and his staff feel strongly that such exercises will be of great value in improving the quick reaction capabilities of the air and ground elements of his command.

The Navy and Marine Corps have also scheduled a full range of tactical exercises during 1964, including joint practice operations with Army units, Navy and Tactical Air Command units and the naval, air and ground forces of our allies. For example, there will be a number of amphibious exercises to give Army and Marine Corps air and ground units practical training in landing and vertical envelopment operations. Elements of both the Atlantic and Pacific Fleets will participate in several large-scale fleet readiness and training exercises including ASW, mine warfare, and air defense operations. Exercises will also be conducted jointly with allied forces such as NATO, CENTO, SEATO, and the Republic of China and the countries of Latin America.

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**F. FINANCIAL SUMMARY**

The General Purpose Forces I have outlined will require Total Obligational Authority of \$19.1 billion for fiscal year 1964 compared with \$18.1 billion for fiscal year 1963, \$17.5 billion for fiscal year 1962, and \$14.5 billion in the original budget estimate for fiscal year 1962.

## V. AIRLIFT AND SEALIFT FORCES

Closely related to the General Purpose Forces are the airlift and sealift forces required to move them promptly to wherever they might be needed. Included in the airlift forces are both the MATS transports and the Air Force Tactical Air Command troop carrier aircraft. The sealift forces include the troop ships, cargo ships and tankers operated by the Military Sea Transport Service and the "Forward Floating Bases."

The General Purpose Forces requirements studies, which I discussed earlier, again underscored the critical importance of a capability to react quickly to aggression in any part of the world, before the situation has deteriorated to a point where much larger forces would be needed to recover lost territory. There are a number of ways in which this quick reaction capability can be provided:

- (1) Military forces can be deployed in advance to potential trouble areas.
- (2) Equipment and supplies can be prepositioned in such areas and military personnel moved by airlift when required.
- (3) Equipment and supplies can be stored aboard ships deployed near potential trouble areas and the men airlifted when needed.
- (4) Both men and equipment can be held in a central reserve in the United States and deployed by airlift and sealift as required.

All of these methods have their advantages and disadvantages. For example, a central reserve of mobile general purpose forces located in the United States and ready for immediate deployment is basically the most flexible arrangement, but very large airlift and sealift forces must be readily available to move them promptly. Prepositioning forces overseas, in contrast, reduces the need for airlift and sealift but introduces a greater degree of rigidity into our military posture and increases both force requirements and defense expenditures abroad. The prepositioning of equipment and supplies in land-based or ship-based depots is something of a compromise between these two extremes. This approach, while economizing on manpower, still requires that airlift be available to move the men to where the materiel is prepositioned, but men are much easier to move by air than equipment.

We believe an appropriate blend of all four methods would produce the best results, and that is what we have attempted to achieve in the proposed program. We already have large general purpose forces deployed

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abroad, particularly in Europe and Korea. We have prepositioned substantial amounts of equipment and supplies in Europe and in the Far East. We have initiated a limited program of forward floating bases. Finally, we are maintaining a large central reserve of General Purpose Forces in the continental United States, and are building the airlift required to move these forces promptly to wherever they might be needed.

A. AIRLIFT

Last year I outlined to the Committee the manner in which we computed our airlift requirements and the forces programmed to fulfill them. Problems encountered during the Cuban crisis, however, have led us to the conclusion that some increase in these forces is necessary.

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The old C-119, while specifically designed for airborne operations, is small and slow and has but a fraction of the range of the new C-130. While it is useful to have in reserve, we cannot rely upon this aircraft for airlift to areas [REDACTED] distant than [REDACTED]. We therefore propose to acquire an additional 6 squadrons of C-130E's which are not only good transport aircraft but are also efficient troop carriers. We plan to acquire the additional aircraft by increasing the production rate from 12 to 15 per month, thus raising the C-130 force to 34 squadrons by early 1965, instead of the 28 squadrons which we had previously programmed. This force will be continued at least through 1968, as shown on Table 13.

As the additional C-130E's are acquired, they will be used to replace an equal number of C-124's which we had planned to keep in the force through 1967. The C-124 is a useful aircraft for strategic airlift, but it is not suitable for air-drop operations. Accordingly, the C-124's will be phased out of the active forces and into the Air Force Reserve more rapidly than we had planned last year.

Another significant change involves the C-123 assault transport. Last year we had planned to phase out these aircraft during fiscal year 1964. However, we have found the C-123 to be an extremely useful aircraft in Vietnam and elsewhere because of its short take-off and landing characteristics. We therefore propose to keep the 80 C-123's now in the force through 1965 and to start phasing them out in 1966, by which time we will have in the inventory large numbers of other suitable aircraft.

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No change has been made in the C-141 program. This aircraft is proceeding satisfactorily in development and production should start as scheduled last year. The increased procurement of C-130E, which is being produced in the same plant, will not interfere with the C-141 production. The planned force of 13 squadrons should be operational by 1968. By that time our total airlift capability in terms of a 30-day airlift operation to South East Asia or Europe will be well over triple the capacity we had in 1961, as shown on Table 13.

Although no new procurement of airlift aircraft is shown in the fiscal year 1968 column of Table 14, new requirements will undoubtedly materialize before that year is reached. For example, the only operational aircraft in our inventory today which is capable of airlifting ATLAS, TITAN and MINUTEMAN ICBM's and other outsize cargo is the C-133. This aircraft has already been in operation for several years and has always been very difficult and costly to maintain in good operating condition. The new C-141 will be able to replace the C-133 for some, but not all, of the out-size items. We may find it possible, either by equipment redesign and modification or by prepositioning, to eliminate the special requirement for out-size cargo in which case, we would be able to replace the C-133's now shown in the force through fiscal year 1968 by an additional procurement of the new C-141.

If, however, we find that the unique capabilities of the C-133 will still be required after fiscal year 1968, we will have to start within the next few years the development of a new large transport and this will be a relatively costly undertaking. For example, one proposal we examined was estimated to cost almost \$1 billion for a force of three squadrons or 48 operational aircraft, including the cost of development.

We are also spending a relatively large sum of money on the development of vertical take-off and landing V/STOL aircraft. The successful development of a V/STOL transport would be a major contribution to our air assault capabilities and would deserve a prominent place in the airlift force. Although we have several such projects in the R&D program, it is uncertain when they will reach the production stage and therefore it would be premature to program such aircraft in the airlift forces at this time.

Finally, we now have underway in the Weapons System Evaluation Group (WSEG) a comprehensive study of the entire airlift-sealift requirement in the light of our limited war strategy and the size and character of the General Purpose Forces we plan to maintain. By this time next year we should be able to provide you with a more comprehensive analysis of our future airlift and sealift requirements.

In addition to the large airlift capacity being built into our active forces, we also intend to maintain a very significant airlift capability in the Air Force reserve components, as shown in Table 13. As additional C-124's are phased into the Air Force Reserve, the number of C-119's will be gradually reduced. The airlift capability of the Air National Guard

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is already being significantly increased as KC-97's are phased out of the active forces and converted into cargo transports.

By the end of 1968 the Air Force reserve components will have a total of 760 airlift aircraft of which over 400 will have a strategic airlift capability. All of our reserve component forces are maintained on a 24-hour full readiness status; in other words, they are available for deployment within 24 hours.

Finally, upon the declaration of a national emergency by the President or the Congress, the Defense Department could call upon some 341 commercial aircraft, about half of which are modern jets, in the Civil Reserve Air Fleet (CRAF). While the cargo-carrying capacity of these aircraft is limited by their configuration, their passenger-carrying capacity is very substantial. The CRAF force could be available within 48 hours after the declaration of a national emergency and could be counted upon for the movement of personnel, particularly those personnel brought in to utilize prepositioned equipment. CRAF could also be used for resupply purposes, where packaged high density items represent a large share of the load and would fill the gap on routine overseas runs left by MATS aircraft called away for other more urgent missions.

B. SEALIFT

The sealift forces shown on Table 13 are the same as those presented to the Committee last year, with two exceptions:

- (1) Troop Ships - Last year we had planned to phase out during 1964 the 16 troop ships now in the MATS active fleet. Although our analyses indicate that troops can be moved far more quickly and economically by air, when adequate airfields are available, the troop ships do provide a capability which could be important in situations where airborne operations would not be feasible or would have to be restricted. They also provide an important lift capacity during the period when we are still building up our airlift forces. Therefore, to provide an extra element of insurance over the near term, we believe it would be prudent to retain these ships in the force at least through 1965.
- (2) Forward Floating Base Ships - Last year we had planned a program of 6 rehabilitated Victory ships loaded with some 15,000 tons of heavy equipment and bulk supplies. This fleet was to be maintained in a ready-to-steam condition in some secure harbor in the Far East. Because of the existing shortages of such materiel, which we are now trying to overcome by increasing the Army procurement program, we believe it would be best to limit this program, for the time being, to the 3 ships which are soon to be deployed to Subic Bay, P. I. This force will enable us to test the F.F.B. concept for possible wider application in the future.

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Last year I indicated that we planned to build one new roll-on/roll-off ship each year through fiscal year 1967, which together with those funded prior to 1961, would make a total of seven. As these roll-on/roll-off ships become available they will replace the older general purpose cargo ships on a one-for-one basis. The force of seven roll-on/roll-off ships will be able to move one entire armored division and land it at relatively primitive ports, since special booms and cranes are not required.

The number of special purpose cargo ships and tankers will be continued unchanged through 1968.

In our review of the 1964-1968 program, we considered a number of proposals to modernize the cargo fleet more rapidly and to begin the modernization of the tanker fleet. But these did not appear to offer a sufficient gain in effectiveness to warrant a decision at this time. To the extent that modernization does become necessary, we may be able to achieve it by means of major rehabilitations similar to the FRAM program for the destroyers and other vessels.

As a matter of policy, the Defense Department does not try to duplicate the general cargo and POL capabilities available in the merchant marine under U.S. control. The military sealift forces are designed to provide a nucleus fleet, instantly and wholly responsive to military needs, plus those special capabilities not ordinarily available commercially. Thus the cargo vessels in the sealift forces have special wide hatches and extra strong cargo booms to handle large and heavy military equipment. Similarly, the sealift tankers are generally smaller than those in the commercial fleet since they must be able to get in and out of the restricted and shallow ports and approaches which are characteristic in the remote areas of the world where limited wars are most likely to occur.

#### C. FINANCIAL SUMMARY

The Airlift and Sealift Forces I have outlined will require Total Obligational Authority of \$1.4 billion for fiscal year 1964 compared with \$1.4 billion for fiscal year 1963, \$1.2 billion for fiscal year 1962, and \$.9 billion in the original budget estimate for fiscal year 1962.

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## VI. RESERVE AND NATIONAL GUARD FORCES

### A. GENERAL

In the preceding sections of this statement I have discussed most of the important issues involved in the Reserve and National Guard Program. In this section I would like to summarize the numbers of men on pay status and the costs of the program. The numbers of Reserve and National Guard personnel in regular paid training for fiscal years 1961, 1962, 1963, and 1964, are shown on Table 15.

As shown at the bottom of Table 15, we have budgeted for 1,075,000 Reserve and National Guard personnel on paid status at the end of fiscal year 1964. This compares with 1,018,400 at end fiscal year 1963 and 958,000 at end fiscal year 1962 when a substantial number of reservists were on active duty. Of these numbers, 969,900 personnel would be receiving regular paid drill training at the end of fiscal year 1964, compared with 950,500 at end fiscal year 1963 and 889,100 at the end of fiscal year 1962.

### B. ARMY RESERVE

Although we have programmed a total of 300,000 Army reservists on paid drill training for end 1963, it now appears that the Army Reserve will end the fiscal year with a participating paid drill strength of about 274,500. This is still a significant increase over the end fiscal year 1962 figure as shown in Table 15 when a substantial number of Army reservists were on active duty. As I noted earlier, the short-fall below the programmed strength is the result primarily of the exceptionally large turnover anticipated during the current fiscal year. For end-1964, we plan again to program 300,000 on drill pay status, but we have budgeted for a participating paid drill strength of 281,000, the number we estimate can be actually attained. The budget also provides two weeks annual active duty training for 80,400 reservists, compared with about 48,400 in the current year and 48,300 in 1962.

### C. ARMY NATIONAL GUARD

In the case of the Army National Guard, we have programmed a total paid drill training strength of 400,000 for the end of the current fiscal year. We currently estimate a participating paid drill strength of 375,500, at end 1963 compared with 361,000 at end 1962 when a substantial number of Guardsmen were on active duty. Again, the exceptionally large turnover of personnel is the principal reason for the short-fall. We plan, again, to program 400,000 for end 1964, but have budgeted for a participating paid drill training strength of 384,400, the number we estimate can be attained by that time.



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#### D. NAVAL RESERVE

For the Naval Reserve we have programmed a total of 126,000 men on paid drill training status for end fiscal year 1964. This compares to 122,000 now estimated for the end of the current fiscal year and 111,300 at the end of fiscal year 1962, when a substantial number of Navy reservists were on active duty. In addition, we have programmed for the coming fiscal year a total of about 10,000 two-week annual training tours, for the so-called "Category D" naval reservists. These personnel are not members of drill pay units but are in a ready reserve status and are subject to recall to active duty in the event of a mobilization. They maintain their military skills by attending non-paid drill training, taking extension courses, attending schools, and by occasional tours of active duty. Last year we requested funds for summer training of 3,700 Category D naval reservists. The Congress considered that number inadequate and provided funds for 7,700, about the same number provided two weeks summer training in fiscal year 1962. The 1964 budget thus provides a further increase of 2,300 spaces for summer training.

#### E. MARINE CORPS RESERVE

The 1964 budget provides regular paid drill training for 45,500 Marine Corps reservists, the same number programmed for fiscal year 1963. In addition 3,430 reservists will be provided two weeks or thirty days training. This is an increase of 680 over the current fiscal year program.

#### F. AIR FORCE RESERVE

For the Air Force Reserve, the 1964 budget provides a total of 61,000 on paid drill training status, the same number estimated for the end of the current fiscal year. An additional 11,200 reservists will receive two weeks active duty training, compared with about 9,000 planned for the current fiscal year. The number of reservists assigned to recovery units will continue at about the current year's level. These units would provide support for Air Force aircraft dispersed to civilian airfields during periods of tension or attack and would assist in the recovery and reconstitution of Air Force operational capabilities in the event of nuclear attack.

#### G. AIR NATIONAL GUARD

The budget provides paid drill training for 72,000 Air National Guard personnel, the same number planned for the current fiscal year and about 22,000 more than the number receiving paid drill training at the end of fiscal year 1962, when a large number of Air National Guard personnel were on active duty.

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#### H. RESERVE OFFICER PARTICIPATION IN THE CIVIL DEFENSE PROGRAM

A problem that has plagued the Civil Defense program for some time has been the shortage of instructors and administrative personnel on the local level. To help remedy this situation I have authorized the Services to award retirement point credits to non-obligated active standby Reserve officers who volunteer to serve without pay in regional, state, and local Civil Defense activities. There are approximately 100,000 officers who have completed their obligated Reserve service and are potentially eligible for this duty.

#### I. OFFICERS EDUCATION PROGRAM (ROTC)

The college Reserve Officers Training Corps (ROTC) program, which has long been a major source of junior officers for all the Services, has in recent years given rise to increasing dissatisfaction on the part of both the military services and university administrators. The program has failed to produce adequate numbers of officers, with a particularly marked deficiency in the category of officers with technical qualifications. In addition, the program has been wasteful in terms of both regular military personnel and classroom facilities.

Many of the best students, particularly those in the scientific and engineering field with heavy laboratory schedules, find great difficulty in working four years of ROTC courses into their already crowded curricula. Nor is the comparatively small monetary allowance during the junior and senior years very much of an inducement for them to make this effort.

In many cases, moreover, it is impossible for qualified students, who are willing to make the effort, to obtain an ROTC commission. A prerequisite for the advanced course leading to a commission is the two-year basic course, which is now available in institutions which enroll only about one-third of all male college freshmen. Thus, two-thirds of the young men entering college will not be able to apply for advanced ROTC training, regardless of how interested or well-qualified they might be.

Even in those schools offering the basic course, only a small percentage are selected for the advanced course. For example, at one large state university, about 5,700 students take the basic course but only about 220 graduates are commissioned each year. The large number of students taking the two-year basic course requires substantial classroom space and a great many regular military personnel to serve as instructors.

To meet these objections, and at the same time to insure a steady flow of qualified officers into the military services, we are proposing new legislation which would:

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- (1) Authorize the military departments to offer an elective 2-year ROTC course leading to a commission (which would normally be given in the junior and senior years) in addition to the presently authorized 4-year program. The proposed curriculum would provide a total of 12 to 14 semester hours of on-campus instruction and would permit up to 12 weeks of summer camp training. The new program would initially be used only by the Army and Air Force, and if successful would gradually replace the 4-year program on a school-by-school basis in all except military colleges.
  - (2) Authorize the military departments to grant a limited number of special scholarships to promising individuals, particularly in the fields of engineering and the physical sciences, provided that they agree to accept a regular commission if tendered and serve four years on active duty. This feature of the plan would be used initially only by the Air Force in an effort to increase the input of technically trained junior officers. If this program proves as successful as we anticipate, the Army may later adopt it.
  - (3) Authorize an increase in compensation for advanced ROTC students. The rate of compensation for advanced ROTC students has not been increased since 1947.

The total cost of the over-all ROTC program would be held at about the present level and, more significantly, the cost per commissioned graduate would actually decrease. The new 2-year program, when broadly implemented, would reduce the number of regular military personnel required as instructors and for support, and these savings would offset the additional cost of scholarships and increased compensation.

Presently, the Army supports a "Junior" ROTC program in nearly 300 public and private high schools at a cost of over \$6 million a year (including the cost of the services of 200 officers and 700 enlisted men). After thorough study, we have serious doubts whether most of this program is worth the cost. The study clearly indicates that the program does not basically contribute to the production of commissioned officers or to mobilization requirements and military readiness. Therefore, we propose, beginning in 1964, to convert these "Junior" ROTC units to National Defense Cadet Corps status, whereby most of the cost would be shifted to the school if it wished to continue the program. The Army would continue to support the present "Junior" ROTC program at bona-fide military schools.

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**J. FINANCIAL SUMMARY**

The Reserve and National Guard Forces I have outlined will require total obligational authority of \$2.0 billion for fiscal year 1964, compared to \$2.0 billion for fiscal year 1963, \$1.8 billion for fiscal year 1962, and \$1.7 billion in the original budget estimate for fiscal year 1964.

## VII. RESEARCH AND DEVELOPMENT

This program includes all the research and development effort not directly identified with elements of other programs. In my discussion of the mission-oriented programs, Strategic Retaliatory Forces, General Purpose Forces, etc., I have already touched on a number of projects which are included in the Research and Development Program. At this point I would like to round out in a more systematic fashion the content of this program.

During the last year or so, we have made a number of important management improvements in the R&D area. I believe it is apparent from my previous discussion of some of the technical disappointments which we have encountered in recent years that some basic improvements in the manner in which the R&D program is managed are urgently needed. Research and development expenditures, whether measured in budget terms or in program terms, have been mounting steadily over the years, but too much of this effort is not producing useful results. What we want are weapons and equipment that the fighting man can use. We are not interested in supporting the intellectually challenging, but militarily useless, engineering "tour de force." If we are to make optimum use of our available scientific and engineering manpower resources, we must plan our program carefully and concentrate these resources where they will make the greatest contribution to our military posture.

Poor planning, unrealistic schedules, unnecessary design changes and enormous cost increases over original estimates have continuously disrupted the efficient operation of our research and development program. Most of these difficulties have resulted from inadequate prior planning and unwarranted haste in undertaking large-scale development, and even production, before we have clearly defined what is wanted and before we have clearly determined that a suitable technological basis has been developed on which to build the system. We have often paid too little attention to how a proposed weapon system would be used and what it would cost and, finally, whether the contribution the development could make to our forces would be worth the cost.

Accordingly, we are now following the practice of inaugurating large system development projects only after the completion of what we call a "program definition" phase. To the greatest extent possible, we want to do our thinking and planning before we start "bending metal." Pencils and paper, and even the feasibility testing of "pacing" components, are a lot cheaper than the termination of programs. By a more thorough and complete study and assessment of the facets of each new development -- prior to major commitments -- we can reduce the number of expensive projects which might otherwise later have to be reoriented, stretched out or terminated.

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I want to emphasize that I am talking about a general rule -- about developments which, if successful, would add only marginally to our combat strength. There have been and are exceptions - developments which can add a new and unique dimension to our capability, like the A and H bomb developments and the ICBM. When the potential pay-off is extremely great, correspondingly great costs and risks are justified. But developments which meet this test are rare. The typical development promises, if successful, to achieve a capability that can also be achieved in other ways, usually including the more extensive or imaginative use of existing weapons. In such cases, the urgency is not as great. We believe that the substantial increase in the Defense program initiated during the last two years has put us in a position where we can now afford to move more carefully in the initiation of new major weapon system developments.

We have also made considerable progress during the last year in improving the operations of our "in-house" R&D capabilities. Many specific corrective actions and innovations have been made to improve the operations of our laboratories. Special allotments of funds are now being made to our major laboratories to stimulate and encourage creative research. Procurement policies are being liberalized to eliminate red-tape on small purchases by these laboratories for research purposes. The recent civilian pay reform act is expected to be of assistance in holding highly competent engineers and scientists. All of these measures will contribute greatly to the morale of the scientific work force.

Another major improvement which has been introduced into the research and development area is the reorganization of the program structure and a simplification of its relationship to the Research Development, Testing and Evaluation budget structure. There are four principal RDT&E appropriations, one each for the Army, Navy, Air Force, and one for the Defense Agencies. These appropriations have been broken down into a total of about 320 sub-activities which are identical in both the budget structure and the program structure. These 320 sub-activities are aggregations of some 1,600 technical projects which, in turn, are aggregations of something on the order of 15,000 technical tasks from which stem the tens of thousands of individual contracts and job orders financed each year by the RDT&E appropriations.

Most of the 320-odd RDT&E sub-activities fall under the "Research and Development" program, and constitute its program elements - for example, NIKE-ZEUS, TYPHON, B-70, and Physical Sciences Research. However, about 70 of these RDT&E budget sub-activities which we call "operational systems developments" enter into and become parts of program elements in other major programs. For example, the RDT&E sub-activity, "POLARIS Submarines," is part of the program element, "POLARIS System," which is included in the Strategic Retaliatory Forces.

[REDACTED]

The approximately 250 RDT&E sub-activities in the Research and Development Program have been grouped into five categories: Research; Exploratory Developments; Advanced Developments; Engineering Developments; and Management and Support.

It is from the first three categories that we acquire the "technical building blocks" that we need for our systems developments. We cannot do the applications engineering job (the 4th category) unless these building blocks are available. If we fail to provide them in a timely manner, our efforts to define and manage our large-scale systems developments more efficiently will suffer and we will invite the crash programs and telescoped development-production programs we wish to avoid.

We realize, of course, that it is impossible to "plan" technological evolution. We will no doubt encounter needs which have not been anticipated. But by planning the "non-system" part of our defense research and engineering effort "in the large," without tying it to a particular systems development, we should be able to effect some degree of standardization which, through repeated use of the same components, should increase reliability and reduce costs.

I would now like to turn to the details of the Research and Development Program for fiscal year 1964.

#### A. RESEARCH

This new category includes both basic and applied research directed toward the expansion of knowledge in such fields as the physical and environmental sciences, mathematics, psychology, sociology, biology and medical sciences, as well as "in-house" laboratory independent research. As shown on Table 16, \$362 million is included in the 1964 program for research, compared with \$327 million for 1963 and \$287 million for 1962.

Each of the three military departments would be provided an increased amount of funds for research, while ARPA's research effort would be held fairly stable. Examples of work being done in this area include the Army's research on tropical medicine, the Navy's oceanographic underwater acoustic and arctic research programs, and the Air Force's study of atmospheric density and gravity gradients up to 500,000 feet altitude.

#### B. EXPLORATORY DEVELOPMENTS

This category consists of activities directed toward the solution of specific military problems short of the development of hardware for experimental or operational testing, and varies from fairly fundamental efforts to sophisticated breadboard hardware, study, programming and planning. Along with basic research, it forms the pool of technical knowledge from which future weapon systems will be devised and designed.

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A total of \$1,171 million for exploratory development is included in the 1964 program for the three military departments and ARPA, as shown on Table 16.

1. Army

The Army effort in this area provides studies and analyses and fabrication, test, and evaluation of various components to establish their feasibility, practicability and relative advantages for use in future major development programs. This effort includes: new and improved propulsion systems for Army aircraft; design studies for greatly improved night viewing equipment; applied research in rocket propellants; new, lighter and more reliable electronic fuzes with high jam resistance; improved designs and materials for small arms and armor defeating projectiles; applied research directed toward improved surface mobility, particularly in remote areas; mine warfare and barrier research; and mapping and geodetic research directed toward overcoming the limitations of current equipment and techniques with respect to speed and extent of area covered. About \$39 million of the \$217 million requested for the Army in 1964 will be devoted to biological and chemical warfare projects, including the identification of and experimentation with potential agents, studies of dissemination characteristics and exploratory work on defensive measures.

2. Navy

The Navy's exploratory development effort is planned to produce improved "know-how" for the performance of all important naval functions. Included are the detection and localization of underwater, surface, and air targets; environmental surveillance with emphasis on the air-ocean interface; navigation; command-control; weaponry; ship and aircraft construction; and personnel and logistics.

The overall program on surveillance and command-control includes work on radar, ASW detection devices, data correlation techniques, navigation devices, communications, etc. for both ships and aircraft. In the field of ordnance, emphasis will be placed on non-nuclear air launch systems. Missile propellants, guidance systems and countermeasures will also be studied. Several projects involve advanced aircraft concepts, with emphasis on simplicity, endurance and low-speed characteristics. Work related to ships and submarines will concentrate on hull structures, integrated controls, and fatigue characteristics of deep-diving submarines, as well as advanced propulsion systems and measures to reduce underwater noise levels.

About one-third of the funds requested will be expended on problems directly related to ASW. In 1964, \$368 million is included for the Navy for exploratory development.



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3. Air Force

Almost one-third of the \$330 million requested for the Air Force's 1964 exploratory development program will be devoted to space or space-related subjects. Included are studies, experimentation and component developments in such broad fields as guidance, flight control, propulsion, life sciences, surveillance and electronic techniques.

Difficult problems remain to be solved in the search-detection-and-tracking of potentially hostile space vehicles due to unknowns associated with space environments, physical tolerance factors, and high speeds and closing rates. The design of successful operational space systems will be directly dependent upon the acquisition of useful data in these areas.

In other areas, emphasis will be accorded to improving technology related to advanced tactical and strategic missiles, new propulsion cycles for hypersonic manned systems, V/STOL aircraft, the feasibility of laminar flow control in supersonic flight, new materials and structural concepts, technology related to reconnaissance, communications, command and control, intelligence techniques, computer and data processing, electromagnetic warfare and advanced weapons.

4. Advanced Research Projects Agency (ARPA)

A total of \$256 million is included in the 1964 program for ARPA's exploratory development projects, compared with \$228 million provided in 1963 and \$226 million in 1962.

a. Project DEFENDER

We have included \$128 million for Project DEFENDER, which is concerned with the development of the scientific and technical knowledge needed for the design of U. S. defenses against ICBM's and IRBM's and for the assessment of the ability of U. S. ballistic missile systems to penetrate Soviet defenses. The project involves the making of precise measurements of ballistic missile flight phenomena which are of importance to the operation of a ballistic missile defense, the development and application of new ballistic missile defense techniques and the study of advanced defense system concepts. About half of the \$128 million requested for DEFENDER will be devoted to the study of missile re-entry phenomena, including full-scale experiments in the Pacific. This work will be particularly helpful in defining the Army's NIKE-X development program. It will also be important for the Air Force and Navy programs concerned with the development of penetration aids for our strategic retaliatory missiles.

b. Project VELA

We are requesting \$52 million to continue work on Project VELA, the objective of which is to obtain an improved capability for detection of

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nuclear explosions underground and at high altitudes. We already have an adequate capability to detect nuclear tests in the atmosphere. The underground test detection program involves monitoring and evaluating data from nuclear and chemical explosions as well as associated research in seismology and propagation phenomena in order to develop improved nuclear detection techniques.

The high altitude part of the program involves the detection of nuclear explosions at very high altitudes by means of instruments located on the earth and instruments carried by high-altitude satellites.

c. Project AGILE

This project is designed to provide research and development support for remote area conflict problems with primary emphasis on the requirements of indigenous military forces in guerrilla warfare situations. The present orientation of Project AGILE is to Southeast Asia, and ARPA centers have been established in Bangkok and Saigon. In view of the importance of this project, \$26 million is being recommended for 1964, compared to \$11 million in 1962 and \$18 million during the current fiscal year.

d. Propellant Chemistry

Twenty-five million dollars is provided in the 1964 program for this project, which is devoted chiefly to increasing the specific impulse of fuels used in missiles.

C. ADVANCED DEVELOPMENTS

This category includes projects which have advanced to a point where the development of experimental hardware for technical or operational testing is required, prior to the determination of whether the items should be designed or engineered for eventual service use.

1. Army

Tri-Service V/STOL aircraft. The \$10 million shown on Table 16 for the Army for this project represents only one-third of the total amount of funds we plan to devote to it during 1964. The balance is shown under the Navy and Air Force headings, bringing the total to \$31 million, compared with \$36 million in 1963 and \$19 million in 1962. The purpose of this joint program is to develop prototype vertical or short take-off and landing aircraft suitable for operational testing by the three Services. The V/STOL provides the vertical take-off and landing features of a helicopter, but also permits a much greater speed in level flight. There are actually three distinct projects under this program:

- (a) XC-142 - a large prototype tilt-wing transport aircraft being developed under Air Force management. This aircraft

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will have a gross weight of 25,000 - 35,000 pounds, cruise speed of more than 250 knots, a combat radius of 200 - 300 nautical miles with a four-ton payload and ten minute hover. It is planned to produce five prototypes for flight test and Army and Air Force evaluation of operational problems and suitability.

(b)X-22A - a half scale twin-tandem ducted fan-powered flight research vehicle being developed under Navy management of which we plan to build two prototypes.

(c)X-19 - Curtiss-Wright Model 200 aircraft with twin T-55 turbines and four tilting propellers. The Air Force will procure two of these aircraft as flight research vehicles.

The next item, new surveillance aircraft, is another Tri-Service effort. The P-1127 Hawker is a British designed V/STOL development which, it is planned, the U. K., the U. S. and Germany will support on a tripartite basis. The United States share for fiscal year 1964 is planned at \$10 million, of which the Army will fund half and the Navy and Air Force one-quarter each. In addition \$7 million has been included in the Air Force budget to support the development of advanced propulsion systems for this type of aircraft. The balance of the \$10 million shown under the Army program is for continued work on four research aircraft; two turbine-driven lift (fan-in-wing) and two augmented jet type aircraft now being fabricated and tested. The purpose of this program is to determine the technical and operational feasibility of these types of aircraft and propulsion systems for use as a high subsonic surveillance system. The program includes study and investigation of concepts as well as experimental flight test of the research aircraft.

The \$20 million shown for the communications satellite for 1964 represents the Army's share of this project. Last May, responsibility for a military communications satellite system was reallocated within the Defense Department. The Department of the Army will retain responsibility for the development, implementation and operation of the ground environment system for which the \$20 million is requested. The Department of the Air Force will be responsible for the development, production and launching of all space systems, and funds for that purpose are included in the Air Force program. Finally, the Defense Communications Agency will be responsible for integrating the space and ground elements of the communications satellite system into the Defense Communications System and \$4 million is included elsewhere in the program for this purpose. The \$95 million provided by the Congress last year for the Army's ADVENT program has been reallocated among the three aforementioned agencies, with \$51 million retained by the Army, as shown on Table 16.

We have considered two alternative space satellite communications approaches: (1) a medium altitude, random orbit, non-stabilized system, which is within the present state of the art, and which could become

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operational at a relatively early date; and (2) a high altitude synchronous orbit stabilized satellite system, which might be developed on a longer range schedule. For the present, we have decided to proceed only with the former approach, deferring the latter to some indefinite time in the future.

The medium altitude system will involve 20 to 30 satellites randomly distributed in several orbits at approximately 6,000 nautical-mile altitudes. Each satellite will weigh no more than 100 pounds and will work with the satellite ground environment systems being developed by the Army. The Defense Communications Agency will determine specific ground station locations. We expect that five to seven satellites could be placed in orbit by a single ATLAS Agena launch vehicle. These satellites should be able to operate for at least one year and on this basis sufficient launches will be programmed to maintain at least 20 functioning satellites in orbit at all times. The first R&D launch is planned during the second half of calendar year 1964, and a significant operational capability is expected late in 1965.

The fourth item on the Army list, ZMAR-SPRINT Hard Point Defense, has been modified to make it complementary to the NIKE-X development, which I discussed earlier. The revised program pursues certain specific developments in radar technology and will be oriented toward the defense of hard sites, such as missile bases and command posts, against ballistic missile attack.

The heavy lift helicopter project was started during the current fiscal year through the allocation from the OSD Emergency Fund of \$15 million for the purchase of six Sikorsky heavy lift "flying crane" type helicopters. These machines will be used to test the feasibility of and design requirements for heavy lift helicopters to move heavy Army equipment in support of combat operations over otherwise impassable terrain. Such vehicles would greatly enhance the Army's mobility. Four million dollars is requested for 1964 to continue the test phase of this effort.

The next item, anti-tank weapon system, includes through fiscal year 1963 the advanced development effort on the SHILLELAGH combat vehicle weapon system. By 1964, work on the SHILLELAGH will have moved into the Engineering Development state and it is therefore funded in that category. The \$5 million shown for 1964 under Advanced Developments is to continue work on a heavy anti-tank assault weapon, known as TOW. The TOW is to be a wire-guided missile for infantry use. We expect it to attain a first round kill capability considerably higher and range much greater than current anti-tank missiles, such as the ENTAC.

## 2. Navy

The first two items in the Navy list of Advanced Developments are the Navy's share of the Tri-Service V/STOL and Tri-Service Hawker project, both of which I have already discussed.

The \$75 million shown in the 1964 column for undersea warfare represents an aggregation of various projects, many of which are related to ASW. In addition to ARTEMIS and TRIDENT, which were covered earlier in Section III in connection with the defense against submarine-launched missiles, this item includes work on hydrofoils, detection by surface effects, acoustic countermeasures, etc. It should be noted that the effort in this category represents only part of the ASW research and development effort which is also financed under other headings. As will be noted on the Table, our efforts in this area are being significantly expanded from year to year, reflecting the urgency of the ASW mission.

I have already discussed the next item, Advanced Sea Based Deterrent, in connection with the Strategic Retaliatory Forces. This is not a definitized weapon system, but rather a broad program of investigation and applied research focused on possible configurations of future sea-based strategic systems from which an advanced weapon system may eventually evolve. Among the areas being explored are materials and structures for deep submergence, deep capsule launch capabilities, new propulsion systems, new re-entry systems, etc.

## 3. Air Force

The first and second items on the Air Force list are the Air Force share of the Tri-Service V/STOL program and V/STOL aircraft technology, discussed earlier.

The third item, \$52 million in 1964, is the Air Force share of the Communications Satellite program.

Seven million dollars is requested in the 1964 program to continue the X-15 project. This is a rocket-powered research aircraft which has contributed a great deal of useful knowledge, not only to aircraft design but also to our space effort. More than half of the planned program of 300 test flights has now been accomplished, the original design objectives of flight at speeds of over Mach 6 and at altitudes of over 250,000 feet have been attained, and an enormous amount of research data has been gathered and analyzed. At least another 25 major experiments remain to be conducted with the X-15, many of which are expected to contribute significantly to our space effort, particularly to the X-20 (DYNASOAR) project.

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One hundred and twenty-five million dollars is requested for the DYNASOAR. You will recall that last year the Congress added \$42 million to the \$115 million requested in the President's budget for this project, raising the total to \$157 million, with the proviso that the \$157 million "shall be available only for the DYNASOAR program". You may recall I stated last year that the DYNASOAR program was being reoriented. The intermediate phase of suborbital flight which would have involved the use of a modified TITAN booster has been eliminated and we are now proceeding directly to orbital flight with the planned use of the new TITAN III booster, currently under development. Thus, the DYNASOAR program is now related to the TITAN III development schedule. Considering the program as a whole, we believe that \$131 million is all that will be required for fiscal year 1963. We propose to apply the remaining \$27 million of the \$157 million of RDT&E funds appropriated by the Congress for 1963 to help finance the 1964 increment of the program. I should caution that some very difficult Technical problems still remain to be solved in this program, particularly in connection with the mode of re-entry.

The next item, \$19 million in 1964 for space components, is related to the Aerospace Plane components project, now known as "advanced hypersonic manned aircraft". This is an extremely advanced concept which envisages an aircraft that can take off from a conventional airstrip and fly directly into orbit and return. The approach we are proposing in this project is to solve the basic problems first, particularly the development of the necessary components, before we decide whether to begin the very expensive system development phase. The \$19 million requested for 1964 will be devoted to the development of these components, particularly the extremely complicated power plant, which involves the collection and compression of air, its refrigeration to a liquid state, its separation into oxygen and nitrogen components and its storage of the oxygen for later use in the propulsion system. It is clear that the technologies involved in this concept are so complex that it is far too early to think of system development at this time. Indeed, we have a long way to go before we will be able to demonstrate the technical feasibility of the critical components.

The next item, the Low Altitude Supersonic Vehicles project, for which \$15 million is requested for 1964, is for studies, tests and investigations to establish the feasibility of components which could provide the technical basis for the design of both nuclear and chemical powered supersonic low altitude vehicles. This project replaces Project PLUTO, which was a joint DOD-AEC program aimed at the development of a nuclear ram-jet propulsion system for a high-speed, low-altitude, unmanned vehicle, which could be used either to deliver warheads or for reconnaissance and bomb damage assessment. While there may well be a need for such a vehicle in the future, because of its low altitude penetration capabilities, we are not at all sure

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that it should be nuclear-powered. The advantages of a trans-global range at low altitude which a nuclear-powered vehicle would offer are offset by the critical problems inherent in any airborne nuclear reactor. Accordingly, we believe it is entirely premature to start the development and test of full-scale nuclear engine hardware over and above that required for the demonstration of the TORY IIC reactor now being developed by the AEC and around which the PLUTO engine was planned.

Seventy-nine million dollars is requested to continue the DISCOVERER program which encompasses the development, testing, launching, tracking and control of experimental space payloads and the ejection and recovery of payload capsules from orbit. The results of this important program are directly applicable to many of the Defense Department space efforts and also contribute to the NASA program.

The \$35 million requested for MIDAS in 1964 reflects the re-orientation of this program back to fundamental research and development for reasons which have already been discussed in connection with the Continental Air and Missile Defense Forces. The program will now concentrate on the development of technology associated with the detection, by infrared and optical means, of missile and space vehicle launchers in the booster and sustainer phases. Full use will be made of the DISCOVERER program and "piggy-back" launches and where special launches are required smaller and cheaper vehicles than the ATLAS-AGENA will be utilized.

The next item, Stellar Inertial Guidance, for which we are requesting \$30 million, represents a broad effort to develop improved systems for navigation and aerospace guidance including missiles, satellites, and aircraft. This project explores a guidance technique which could be of considerable importance to the mobile medium range ballistic missile development which I shall discuss later, and to other possible advanced missile systems. It may also lead to great improvements in aircraft navigational devices and to the development of a system for guiding space vehicles from orbit to landings at precisely determined points on earth.

Fifteen million dollars is requested for the Advanced ICBM project which we started last year and which I discussed earlier in connection with the Strategic Retaliatory Forces Program. Again I should caution that this is not a development project but rather a program to investigate technological and operational concepts for ballistic missiles.

The next project, Large Solid Booster, for which we are requesting \$34 million, is designed to provide a technological base for the accelerated development of large solid propellant motors in the 156 inch to 260 inch class. The project will be restricted to

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the development of the basic technological building blocks. This is a coordinated DOD-NASA effort designed to meet potential DOD and NASA needs. Defense is funding and managing the project on behalf of both agencies.

The next project, Remote Detection of Missile Launch, for which we are requesting \$10 million for 1964, is designed to demonstrate the feasibility of detecting missiles launched from anywhere in the Soviet Union while they are still only 30 to 50 miles from the launch sites. The cost would be considerably less than that of the MIDAS system. Considerable progress has been achieved since the program was established last year, but it has not yet advanced to a point where the development of a specific experimental system would be warranted. Accordingly, we plan during 1964 to continue developing the technology. If we should make better progress than now anticipated we could then reprogram additional funds to move into full-scale development.

#### D. ENGINEERING DEVELOPMENTS

This category includes those development programs being engineered for service use, but which have not as yet been approved for production and deployment.

##### 1. Army

I have already discussed in considerable detail in the section on Continental Air and Missile Defense Forces the first two items on the Army list. The \$89 million requested for NIKE-ZEUS will provide for the continuation of the test and evaluation program for that system. The \$246 million requested for NIKE-X will initiate on an urgent basis the development of this new system.

The next item, Missile B, or LANCE, is a light-weight missile system. It is designed as an eventual replacement for HONEST JOHN and LACROSSE, and its self-propelled launcher and associated equipment are expected to have excellent cross-country characteristics and to be air transportable. Development of the system was initiated with the \$8 million provided for the current year. The \$45 million requested for 1964 will permit us to move this system into large-scale development, provided that sufficient accuracy can be attained to make it effective with a non-nuclear warhead.

I mentioned earlier that the SHILLELAGH in 1964 will be moved out of the Advanced Developments category into the Engineering Developments. The \$32 million requested for 1964 will provide for full-scale development. The SHILLELAGH system will be capable of firing either a guided missile or conventional ammunition and will be installed as the principal armament on the new main battle tank and other tank type vehicles, such as the General Sheridan, a reconnaissance/airborne



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assault vehicle. We expect the SHILLELAGH to be significantly superior to the tank gun with respect to first round kill capability. It should become operational in 1966.

Last year we requested \$1 million for studies to determine the characteristics which should be incorporated in the new main battle tank. We are now requesting \$8 million for fiscal year 1964 to begin the actual development of this tank. As presently visualized, the tank would weigh 35 tons, about 16 tons less than the M-60. As I noted earlier, its principal armament would be the SHILLELAGH. Through the use of a hydro-pneumatic suspension system, its cross-country speed would be three times that of the M-60. Its armor would provide protection against a Soviet 100 mm high velocity gun at 800 meters, it would be capable of fording deep streams and it may be air-transportable. The \$8 million requested for 1964 would carry the development through engineering design, procurement or fabrication of engines, transmissions, suspension systems, hull castings and two full-scale wood mock-ups. It should be ready for release to production in 1967 and available for troops at the end of 1968. I might also mention that there is some chance that the Federal Republic of Germany may participate in this development, thus reducing the cost to the United States.

The next item, for which we are requesting \$5 million, is the General Sheridan armored reconnaissance/airborne assault vehicle. This vehicle in its initial configuration will use the SHILLELAGH system with conventional ammunition but provisions have been made for the installation of the SHILLELAGH "missile" system when that becomes available. With a combat weight of 15 tons and a capability for parachute delivery, the Sheridan is ideally suited to limited war operations. The \$5 million requested for 1964 is intended to complete development work, including final engineering and service tests. This vehicle will also be eventually produced for the U.S. Marine Corps and may be sold to other NATO nations, which have already shown great interest in its development.

In the area of surveillance and target acquisition, the 1964 program, funded at \$50 million, will continue work on both airborne and ground-based systems. Efforts will be continued to improve airborne radar, photographic, infrared and radiometric sensing devices and in-flight, data processing and transfer systems. One of the important ground based systems is the MPQ-32 radar, which will be able to locate enemy mortars and artillery by tracking their projectiles. The Army will also support work on nuclear surveillance and intelligence systems.

The \$142 million requested for communications and electronic equipment and components is almost a third more than the current

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fiscal year and more than double the 1962 level. This program includes the development of the automatic switching system which will form the heart of the Defense Communications System. In the area of tactical communications, work will be continued on a number of improvements for radios used in forward area operations. In avionics, increased effort will be made on the development of navigation and control systems for aircraft supporting the ground forces or special operations.

The \$39 million for air mobility will complete the development of the Light Observation Helicopter and support the continued development of an armed escort helicopter suitable for protecting troop-carrying helicopters. Also included in this category is the aircraft suppressive fire program, which is concerned with the adaptation of such weapons as machine guns, 2.75" rockets, SS-11 anti-tank missiles, etc., to Army aircraft.

Thirty seven million dollars is included for the development of Army artillery. Despite recent improvements in aircraft armament and tactical missiles, artillery continues to be a highly effective weapon for many missions. In order to improve mobility, work is being done on new and lighter 105 mm and 155 mm artillery weapons, self-propelled carriages, and light weight air-droppable towed artillery pieces suitable for airborne operations. Work on improved atomic munitions will include projectiles for the 175 mm gun to replace the capability previously provided by the 280 mm atomic cannon.

The increased emphasis being given to non-nuclear ground warfare is reflected in the \$19 million requested for Infantry Weapons. This is about the same amount as provided for the current year but almost three times the 1962 level. Among the projects included are: special ordnance for guerrilla and counter-guerrilla warfare; improved high explosive and illuminating shells for the 81 mm Mortar; a more effective vehicle mounted rapid fire system; and a special purpose individual weapon capable of engaging both point and area type targets to a range of 400 meters.

## 2. Navy

The first Navy item on Table 16 is the Wire Guided Torpedo EX-10, an advanced heavy anti-submarine torpedo intended to meet the threat which we are likely to face after 1969. The EX-10 will have mid-course wire guidance and terminal acoustic homing, will be deliverable by either submarines or surface ships and will have a secondary capability against enemy surface ships. The \$13 million shown for 1964 will support development of the acoustic homing, guidance and propulsion systems.

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The second item, \$16 million for aircraft engines, is for the continued development of a regenerative turbo-prop engine which was initiated last year. Component development work already completed indicates that such an engine would have a significantly lower specific fuel consumption than a straight turbo-prop engine at partial power and at low altitudes, the typical conditions under which ASW aircraft have to operate. While the performance of reciprocating engines under the same conditions compares favorably with the regenerative turbo-prop engine, it is not as efficient at high altitudes. Furthermore, reciprocating engine-powered aircraft are gradually being phased out of the combat forces, except for ASW and AEW-type aircraft. The refitting of these aircraft with regenerative turbo-prop engines would eliminate the requirement for aviation gas in the supply system, thus reducing operating costs.

The third item, \$30 million for an Advanced Design ASW Destroyer Escort System, represents a new departure in ship design. As I mentioned in my discussion of the Navy's General Purpose Forces, this is the first ship to be designed, from the keel up, as an integrated weapon system. This ship of about 3500-4500 tons is to be optimized for the ASW mission, and will incorporate a number of advances which we have made in our surface-ship ASW gear. We hope it will succeed in countering the trend toward larger and more expensive ships, and that it will be significantly more capable and reliable and require fewer personnel. It will be quieter than existing ships and will carry a longer range sonar. These two features combine to permit higher speed operation with over-all increased effectiveness.

The next item is \$11 million to initiate system development of a new Short Range Guided Air -to-Surface Weapon known as WALLEYE, a television guided, free-fall bomb. WALLEYE would be carried by attack aircraft for use against tactical targets. After visual identification by the pilot, this bomb would automatically track surface targets and guide itself to them. Preliminary development of the guidance system under the Navy's Exploratory Development program has been completed, and with the funds requested for 1964 we plan to complete production engineering, computer development, environmental tests and fuze and warhead development.

Although we recognize the need for a new ship-based light attack aircraft to replace the A-4 series aircraft (A4D-1/2/2N/5) in the late 1960's and early 1970's, we do not as yet have a sufficiently clear understanding of the performance characteristics such an aircraft should have in that time period. Accordingly, I have asked the Navy and the Director of Defense Research and Engineering to undertake a thorough study of this particular requirement. Pending the completion of this study we have included in the Navy R&D program \$10 million for Avionics Developments which could be used in a new light attack aircraft or other Navy aircraft.

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The next item, of \$60 million, is for the continued development of the TYPHON, an integrated surface-to-air weapon system which I discussed earlier in connection with the shipbuilding program. We had initially planned to develop two versions, a long-range ram-jet missile and a medium-range solid rocket missile. For reasons which I have already discussed, we have now reoriented this program to concentrate on the medium-range version and a radar to complement it. By early 1964 we plan to install a full-scale prototype system aboard the USS Norton Sound. Firings should begin at the start of next year.

Sea Mauler, for which \$6 million is requested, is an adaptation of the Army's Mauler weapon pod for shipboard use. Sea Mauler will be a completely autonomous system with its own acquisition and tracking radars, computers, missiles and launchers designed to give an effective air and missile defense capability to our smaller combatant ships and amphibious vessels. It may also provide some capability in the surface-to-surface role.

Sixteen million dollars is provided for the continued development of the TRANSIT navigational satellite system which is designed to provide navigational fixes at any point on the earth's surface in all weather conditions. Its primary use will be in support of POLARIS. An operational system would consist of four satellites, four ground tracking stations, a computing station, two injection stations and certain other equipment aboard each ship. The 1963 and prior year programs will complete the design and development of operational TRANSIT system equipment. The 1964 program will support the introduction into the Fleet of a fully operational and integrated system.

Approximately \$13 million, more than double the 1962 level, is included in the 1964 program for engineering developments of interest to the Marine Corps, including radar surveillance systems, weapons and vehicles. Specific projects include an assault amphibious personnel carrier able to transport infantry weapons and supplies through very rough surfs in the assault phase of an amphibious operation, a landing force amphibious support vehicle for rapid movement of supplies and equipment from ship to shore and overland and a family of light weight helicopter-transportable high performance ground radars.

### 3. Air Force

The first item on the Air Force list of Engineering Developments is the B-70 which I discussed at great length in the section on the Strategic Retaliatory Forces. The \$81 million for 1964 will substantially complete the \$1.3 billion program of three prototypes.

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The \$61 million shown on the next line of the Table in the 1963 column is the balance of the \$363 million appropriated by the Congress last year for the B-70/RS-70, and will be held in reserve for that program.

I have also discussed the next item, the MMRRM, in connection with the General Purpose Forces program. Late in fiscal year 1962, \$4 million was reprogrammed and applied to this project to commence Phase I - program definition. The Congress provided \$80 million for fiscal year 1963 of which \$12 million has been applied to complete the program definition phase and \$30 million will be available for Phase II. Practically all of the balance of the \$80 million has been applied to the "Stellar Inertial Guidance" project which I discussed earlier, of which \$36 million is directly applicable to the MMRRM.

The \$150 million requested for fiscal year 1964 would continue full-scale development of this missile. Present planning parameters for this weapon system shape up as follows: a two-stage, solid propellant missile weighing approximately 12,500 pounds with a maximum range of about 2,000 nautical miles. A stellar inertial guidance system should give it a CEP of [REDACTED] a simplified, all-inertial system is also possible depending on how the operational requirements and technical developments trade off. The missile and necessary support equipment are to be suitable for deployment in a single vehicle capable of operating over all primary and most secondary roads in Europe, as well as from surface ships.

One word of caution: no decision has yet been made to produce and deploy this weapon. Nevertheless, I believe it would be a good investment to proceed with the development at this time since we may need a weapon of this sort to fill the range gap between the PERSHING and the ICBM's.

The next item, \$219 million for development of new missile re-entry systems, is the principal Air Force penetration aids project. Other funds for penetration aids, which were dealt with at some length in Section II of this statement, are included as integral parts of major missile developments.

Forty million dollars is included for Satellite Inspector, a system designed to provide a capability to rendezvous with and inspect potentially hostile orbiting objects [REDACTED] This program is currently under intensive study by the Air Force with a view to possibly reorienting the program [REDACTED]

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The next item is the TITAN III Space Booster for which we have included \$330 million in 1964. The total cost to complete its development is estimated at \$800 or \$900 million. The TITAN III is designed to serve NASA as well as DOD purposes and is planned as a standardized boost vehicle for a wide range of manned and unmanned missions. It will have two basic configurations. Configuration A, which could place a payload of 6,500 pounds into a low 100 nautical mile orbit, combines a modified TITAN II with a storable propellant upper stage and control module to house the guidance telemeter and power supply. Configuration C, which could boost 27,000 pounds into low orbit, consists of Configuration A plus two large segmented solid propellant rocket motors attached to the TITAN II missile as first stages. The first test launch of Configuration A is scheduled for mid-1964. Because this project is justified primarily as a cost-savings program, its continued development will depend upon achievement of the cost objectives.

#### E. MANAGEMENT AND SUPPORT

This category provides for the support of research and development installations such as ranges, test facilities and laboratories, and - in the case of the Air Force - specialized technical and scientific services performed under contract with outside institutions.

##### 1. Army

As shown on Table 16, \$74 million is requested for the support of the White Sands Missile Range, one of the three National Ranges. The principal activities conducted are the testing of Army, Navy and Air Force missiles, and other research tests for Defense and NASA. In 1964, White Sands will also participate in the Air Force Ballistic Missile Re-entry System Program.

The remaining \$158 million provides general support for the operation of a large number of Army research laboratories, test facilities, and proving grounds. It also includes the construction of new facilities and the procurement of equipment for existing installations. Many Army research activities are tenants at larger Army installations and a portion of the cost of maintaining these installations is borne by the research activity and is included here.

##### 2. Navy

The operation of the Pacific Missile Range will require \$173 million in 1964, an increase of nearly \$40 million over the current year. This range, consisting of a complex of instrumentation facilities along the California coast and extending across the Pacific, supports Air Force, Navy and NASA launches from Vandenberg, Point Arguello and Point Mugu, the NIKE-ZEUS tests at Kwajalein and other missile and space programs. The range is used in testing

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and crew training for Air Force strategic missiles, and for Navy ship and aircraft missiles. A portion of the 1964 increase is attributable to the proposed purchase of the Sudden Ranch lying to the south of Point Arguello, which is needed to support the nation's rapidly growing space program.

The next item, Atlantic Undersea Test and Evaluation Center (AUTEC) will require \$20 million in 1964, somewhat less than is provided in the current year. Among its important uses are the testing of various anti-submarine weapons and equipment, the measurement of noise levels of U.S. submarine and surface ships and the calibration of sonar equipment. Included in the 1964 program are funds for the construction and instrumentation of additional facilities required in the expanded effort to develop more effective systems for the detection and tracking of submarines, particularly nuclear-powered submarines.

The remaining \$200 million is for general support of the extensive system of Navy-operated laboratories, test centers, and other field activities associated with the research, development, test and evaluation effort.

### 3. Air Force

For the Atlantic Missile Range, the third of the national ranges, \$249 million is provided. The \$305 million shown for 1963 is unusually high because it included about \$83 million for the acquisition of instrumented range ships, a one-time cost. This Range will continue to support the Air Force strategic missile programs and the POLARIS development and operational test program. Increased support will be required for the Military and NASA space efforts, including the manned space flight programs.

The \$6 million included for the Armed Services Technical Information Agency (ASTIA) compares with \$3 million in fiscal year 1962 and \$4 million in fiscal year 1963. This increased amount will permit ASTIA to improve its acquisition, storage, and distribution of technical documents, an important part of our effort to improve the management of technical and scientific information.

General Support, including "Development Support", will require \$679 million in 1964, about \$140 million more than in the current year. This item carries the major support of the Air Force Systems Command and its nation-wide complex of research, development and test installations, the construction of additional research and development facilities, and other support programs. It includes \$120 million for the cost of services provided under

[REDACTED]

contract by organizations such as RAND, Aerospace Corporation, and the Space Technology Laboratories.

#### F. EMERGENCY FUND

For the DOD Emergency Fund, as in prior years, we are requesting the appropriation of \$150 million and transfer authority of the same amount.

#### G. SPACE

Because of the importance of the Defense Department's space effort and its relation to the national space program, I believe it would be useful at this point to recapitulate the space projects included in the Defense budget. Table 17 summarizes the Department of Defense space program for fiscal years 1961, 1962, 1963, and 1964. Certain projects, particularly those in the first two categories, spacecraft mission projects and vehicle and engine developments, are clearly identifiable as part of this program. Other activities, particularly ground support, supporting research and development, and general support, must be pro-rated to the space program. All in all, we estimate that about \$1,650 million of our 1964 budget request is for space, about \$50 million more than 1963 and almost \$400 million more than 1962.

The military space program accounts for more than 20 percent of the total 1964 research and development program. It is the largest single program grouping in the Research, Development, Test and Evaluation category, exceeding, for example, our total expenditures for the development of strategic weapons. Because the space effort is very costly and because we attach great importance to rapid progress along this new technological frontier, we also consider it essential that the Defense Department space program meet two fundamental criteria.

First, it must mesh with the efforts of the National Aeronautics and Space Administration (NASA) in all vital areas. We must ensure that the Defense and NASA programs, taken together, constitute an integrated national program, and that knowledge and information flow freely between the two. Second, projects supported by the Defense Department must promise, insofar as possible, to enhance our military power and effectiveness. Space technology is new and its implications, especially for the military mission, cannot be fully known or foreseen at this time. It is these very uncertainties about the character and importance of space undertakings for military purposes that have led us to give such emphasis to space in the Defense program.



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The relationship between Defense and NASA has been very close and productive over a long period of years. Mr. Webb and I have devoted considerable personal effort to continuing that relationship and to extending it to meet the new requirements presented by the rapid expansion into space.

NASA was established, as you know, in 1958 following the dissolution of the National Advisory Committee on Aeronautics (NACA). NACA was formed in 1917 and, from the very beginning, enjoyed the active participation of the military departments in the supervision of its activities. The NACA laboratories concentrated their efforts on basic and applied research and on component test and design for both civilian and military aeronautics.

The Space Act of 1958 which established NASA also established a Civilian Military Liaison Committee to provide for the coordination of NASA and DOD space activities. In 1960 the coordinating activities of this Committee were assumed by a new Board, the Aeronautics and Astronautics Coordinating Board. The functions and work of this Board provide one of the best examples of continuing and effective cooperation between government agencies engaged in parallel and interacting fields of activity. Eighteen meetings of the Board have been held. Each of these meetings was attended by Army, Navy and Air Force members as well as representatives from my office and NASA.

A year ago, I issued a directive clarifying the procedures for ensuring a proper meshing of the military and civilian space programs. The directive specified that all basic agreements for DOD support of NASA undertakings would be made in writing between the Administrator of the NASA and the Secretary of Defense. It also assigned to the Director of Defense Research and Engineering responsibility for the studies and analyses necessary to serve as a basis for such agreements and assigned to the Comptroller the responsibility of coordinating the necessary financial arrangements. These provisions formalized arrangements that had been put into effect during the preceding year.

The same directive also assigned responsibility to the Air Force for research, development, test and engineering of satellites, boosters and associated systems required by NASA. In addition, the Secretary of each military department was directed to establish the required supporting activities in his area of responsibility. For example, the Air Force established an office of Manned Space Flight in the Air Force Systems Command. This office has 28 officers, five of whom are physically located at NASA.

A large number of similar arrangements and agreements have been established between Defense and NASA. Nearly 50 agreements

[REDACTED]

and policy directives have been issued since January 1961. Defense did more than \$550 million of work for NASA during 1962. Nearly 200 officers are now assigned to NASA. Increasingly, the space efforts of Defense and NASA have become interwoven and more effective, particularly during the past two years when the space programs have been growing very rapidly. I am determined, and I am sure Mr. Webb shares my determination, to ensure the continuation of this excellent relationship.

An important additional example of this relationship is the agreement which Mr. Webb and I recently concluded, converting GEMINI into a national manned space flight program and establishing a joint GEMINI Program Planning Board, composed of both NASA and Defense Department representatives. This Board will provide program planning to insure that the needs of the NASA and the Defense Department are fully met. Under the terms of the agreement, the co-chairmen of the Program Planning Board will be the Associate Administrator of the NASA, Dr. Robert C. Seamans, and the Assistant Secretary of the Air Force for Research and Development, Dr. Brockway McMillan. The Board will report directly to Mr. Webb and to me and will have broad powers to plan the GEMINI program so as to make certain that it will be fully responsive to military as well as to NASA experimental, operational and program requirements.

Among other principal efforts in which both agencies share a great interest are the TITAN III and the X-20 (DYNASOAR). Before I approved the TITAN III project it was thoroughly studied by both NASA and the Department of Defense. Mr. Webb and I agreed that the TITAN III should become an integral part of the National Launch Vehicle Program.

Similarly, the X-20, our principal manned space flight project, has also been designed to complement the manned space flight efforts of NASA.

Speaking broadly, approximately half of our space effort is directed to relatively well recognized and understood military requirements, such as satellite communications and navigation systems, the development of anti-satellite capabilities, etc. The balance of our effort, however, is not undertaken to meet well defined military needs but, rather, is aimed at creating a broad base of new technology, devices and even systems for possible future applications. The TITAN III is a good example. Although we believe that it is likely to have important military applications in the future, we are not waiting to define them in great detail before proceeding with the development. For similar reasons we are requesting nearly \$200 million for development in fields specifically related to space undertakings such as new materials, component development and bioastronautics. In this way, we hope

[REDACTED]

to ensure an ample technological base upon which future systems could, if needed, be developed without delay.

#### H. FINANCIAL SUMMARY

The Research and Development Program I have outlined will require Total Obligational Authority of \$5.9 billion for fiscal year 1964 compared with \$5.5 billion for fiscal year 1963, \$4.3 billion for fiscal year 1962 and \$3.9 billion in the original budget estimate for fiscal year 1962.

## VIII - GENERAL SUPPORT

General Support, as I pointed out last year, constitutes an "all other" or residual category of activities or programs and includes all costs not capable of being directly or meaningfully allocated to the other major programs. Because of the large number and wide variety of the functions encompassed by this major program, it is best discussed in terms of its constituent parts.

For purposes of convenience, the General Support Program has been divided into eight broad groupings: individual training and education; intelligence and security; communications; logistic support; medical services; command and general support; the Defense Atomic Support Program; miscellaneous Department-wide activities; and retired pay. These broad groupings are themselves further broken down into more specific categories or functions, a selected list of which is shown on Table 18.

The General Support Program, from the viewpoint of cost, is the second largest of the nine major programs, accounting for more than one-quarter of the total. Much of it, for practical management purposes, represents "fixed charges." Military retired pay costs, for example, are a function of the existing statutory rate structure and the number of retirees on the rolls. Other elements, such as recruit training, are so influenced by other program decisions, such as the size of the forces, that comparatively little flexibility exists in controlling their costs. But, wherever we have had some discretion in the fiscal year 1964 program, we have ruthlessly eliminated marginal items or activities.

It would be impractical in this statement to attempt either a comprehensive description of the various elements of the fiscal year 1964 General Support Program or to try to recount all of the myriad actions which we took during the program and budget reviews to ensure economy and efficiency. Accordingly, I will briefly describe each element shown on the table and highlight some of the important trends and some of the actions taken to reduce costs.

### A. INDIVIDUAL TRAINING AND EDUCATION

This portion of the General Support Program includes the cost of equipment, base support, construction, instructors, students, and travel directly related to recruit, technical, professional, and flight training, as well as support of the Service academies.

#### 1. Recruit Training

Two-thirds of the cost of all recruit training is borne by the Army, chiefly because of their higher turnover rate resulting from reliance upon

[REDACTED]

the draft, their longer period of basic and common specialist training, and their more intensive use of high-cost equipment during this stage of training, as contrasted with the indoctrination type instruction given by the Navy and the Air Force. The last two factors also apply to the Marine Corps, with the result that its recruit training costs exceed those of either the Navy or Air Force.

The average recruit training load of all four Services will increase in fiscal year 1964 by a total of about 23,000 men. About 18,000 of the increase will be in the Army, where a biennial pattern of peaks and valleys in new accessions has grown up over the years. As I noted earlier, it was to reduce these costly fluctuations that I authorized a temporary increase in the Army's military personnel strength, for end fiscal year 1963, from 960,000 to 980,000.

## 2. Technical Training

Technical training includes all factory and resident training in a particular occupational specialty. The Army technical training load for fiscal year 1964 reflects the new emphasis being given by that Service to Special Warfare Forces in general, and to area and language training in particular. The Air Force will continue its emphasis on missile operation training, while the Navy's program will stress instruction in the use of the new Navy Tactical Data System and the TERRIER, TARTAR and TALOS missiles.

Technical training is now a billion dollar a year activity and, in view of the increasing complexity and rapid change of our weapons and equipment, is likely to remain so for as far ahead as we can see. One of the major reasons for the high cost is the need for very expensive and complicated training equipment. For example, over 100 aircraft are presently assigned to Navy technical schools to provide practical instruction in aircraft maintenance, air intelligence, airborne electronics, etc.

Technical training levels for fiscal year 1964 are planned at approximately the level of the past two years. Costs, however, will rise although the total has been held down by close scrutiny of Service requests for increases in numbers of students and for expensive training equipment marginal to the basic requirements for sound instruction. For example, a proposed 100 percent enrollment increase at the Air Force School of Logistics was reduced to a 10 percent increase.

## 3. Professional Training

Professional Training encompasses primarily college level and post-graduate level course of instruction directed to the career

[REDACTED]

development and professional qualifications of officers and selected enlisted personnel. Included in this category are the joint Service colleges, staff schools, post-graduate schools, officer candidate schools, and the education of military personnel at civilian colleges and universities.

In view of the substantial sums involved in professional training, we have made an especially vigorous effort to hold costs down. As shown on Table 18, total obligational authority in fiscal year 1964 for professional training will actually decline slightly from the current year level.

To accomplish this, it was necessary to deal severely with the Services' requests for program increases. Thus, the Air Force's undergraduate degree program, a desirable but less needed type of training, was eliminated to make room for the SAC MINUTEMAN program. The latter is an arrangement whereby officers can earn master's degrees in business administration or engineering after three years of instruction while performing a full-time job as launch control officers.

Professional training in the Army will include extended courses in language training and area studies, as a result of the Army's new responsibilities in the special warfare field.

Finally, the Navy plans to boost the enrollment at its post-graduate school in Monterey to 1,619 in 1964 - an increase of 283 over the current year's enrollment.

#### 4. Flight Training

The principal elements of flight training are the costs of training pilots and navigators before their assignment to combat units and the procurement and maintenance of flight training aircraft. For 1964, Navy pilot production will hold steady at 1,700, while the Army will rise from 840 in the current fiscal year to 1,200 in fiscal year 1964. The Air Force rate will show the first of three scheduled annual increments, going from 1,384 during the current fiscal year to 1,500 in 1964, and 2,000 by 1966. These increases are needed to avert a serious pilot shortage in future years when large numbers of pilots who entered service during World War II will be released from flying status.

We plan to spend about \$125 million in fiscal year 1964 for the procurement of flight training aircraft. More than two-thirds of this amount is earmarked for 151 T-38A's - an advanced supersonic trainer for the Air Force. The Air Force also plans to purchase 83 T-37 primary trainers to support the increased pilot training.

[REDACTED]

[REDACTED]

The Navy plans to procure a dozen of the new T-2 and 25 advanced propeller-driven aircraft - probably U-8 (L-23). We have deferred until 1965 or later a Navy request to purchase advanced jet trainers.

5. Other

The three Service academies presently carry a total cadet training load of nearly 8,900 men. The chief variable in the cost of this program is the construction of new or replacement facilities. As in the case of the country's civilian colleges, the requirement for modern instructional facilities, such as costly technical and scientific laboratories, has already begun to press on our Service academies.

Certain academy-connected construction projects, such as the final stage in the rehabilitation of Bancroft Hall and a new science facility at the Naval Academy, have been provided for in the fiscal year 1964 program. However, other highly desirable projects have been deferred as part of our over-all effort to hold to a minimum our construction program for the next fiscal year.

Also included under this heading are the costs of general training devices, films, publications, testing activities, correspondence schools and other miscellaneous training support activities, as well as the operating costs of the major training command headquarters within each Service.

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As shown on Table 18, total obligational authority for individual training and education in fiscal year 1964 will be about \$3.1 billion, about \$250 million higher than the current year - notwithstanding our efforts to hold these costs to the minimum.

B. INTELLIGENCE AND SECURITY

The intelligence and security activities of the Department of Defense can be divided into two broad categories, [REDACTED]. Since this is a highly sensitive area, I know that you will understand when I discuss it only in general terms. The costs of the intelligence and security programs in 1964 will be somewhat lower than in the current year, with an increase in [REDACTED] intelligence efforts more than offset by decreased requirements in the [REDACTED] area.

1. [REDACTED]

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For example, the introduction of the longer range POLARIS A-3 missile will greatly increase the need for very highly accurate charts of ocean areas. Similarly, our experience in Vietnam has pointed up the need for better and more current tactical maps in those areas of the world where we are liable to be engaged in counter-guerrilla activities. With respect to attaches, there have been and continue to be increased requirements for representation in the newly independent countries.

The reorganization of the military intelligence function, with the transfer of a number of activities to the Defense Intelligence Agency, is designed to improve greatly the quality of the intelligence product available to decision-makers. Although we intend that the collection and production of intelligence data be made as efficient as possible, comprehensive coverage and accurate information remain our primary goals.

#### C. COMMUNICATIONS

Communications includes the costs of the Defense Communications System (DCS) and non-DCS communications operated by the Military Departments. DCS elements include the long haul, point-to-point wire, cable, and radio communications facilities, both government owned and leased, (formerly portions of the Strategic Army Communications System (STARCOM), the Navy Communications System, the Aerospace Communications Complex (AIRCOM) ) and the various communications facilities associated with the



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National Military Command System (NMCS). Non-DCS elements include those operated by the Military Departments which are self-contained within organizations; self-contained information gathering, transmitting and/or communications facilities which are normally local in operation and use; land, ship, and airborne terminal facilities of broadcast, shore-to-ship, ship-to-ship, air-to-air, and ground-air-ground systems.

The increasing dependence of modern military operations on sophisticated and expensive communications is reflected in the rising costs shown on Table 18. For the most part, these increases are related to new operational requirements for reduced reaction time and better reliability, the changeover to automated equipment and steadily growing workloads for almost all elements of the Defense communications complex.

One of the largest increases in this category is for DCA facilities provided by the Air Force. Procurement and construction costs will rise by nearly \$60 million over the current year's level. Major investment items for this system will include analog switches for DCS lines overseas; equipment and construction for a tropospheric scatter communications system, [REDACTED] in the NATO area; a survivable low frequency system to provide long-range communications during or after a nuclear attack; and new voice communication links between the Philippines and Saigon.

The cost of naval communications, including DCS systems, will also increase by nearly \$70 million in 1964, with additional funds being devoted to the conversion of teletype equipment to permit higher transmission rates, the accomplishment of several communications tasks in support of DCA's Mid-Range Plan, and the purchase of new equipment and construction to support the communications needs of the fleet.

Upwards of \$150 million is included for the Army's STARCOM system. New networks will be provided in Southeast Asia, South America and in the Caribbean.

One further subject might be mentioned most appropriately at this point - the World-Wide Military Command and Control System (WWMCCS), several important elements of which are included in the communications area. The WWMCCS is intended to provide the constituted national authorities with the information needed for accurate and timely decisions and the reliable communications needed to transmit these decisions to the military forces under all conditions of peace or war. It includes the National Military Command Center in the Pentagon, three different kinds of alternate emergency command posts (discussed later in this Section), our survivable communications systems, and parts of other activities which support the command and control functions - such as the Defense Intelligence Agency and the Department of Defense Damage Assessment Center. This latter organization is being transferred from the Defense Atomic Support Agency to DCA so that its capabilities can be more fully integrated with the NMCS.

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As a result of experience during the Cuban affair, a review was made to determine how over-all Government needs in the communications area could best be served in a future crisis. Based on this review, action was taken by Defense, State and CIA to promote greater joint use of existing facilities and to add immediately certain critical features to the existing basic systems. Additional measures are provided for in the 1964 budget and we are continuing to study future requirements in this area with the help of other interested agencies.

The total for Communications would have been much higher if marginal, though still desirable, projects had not been eliminated and requests for operating funds cut to the minimum during last fall's budget review. For example, the Navy's request for the operation and maintenance of its communications system was reduced by \$22.5 million. A proposal to improve direct communications between the Atlantic and Pacific Missile Ranges was disapproved - with a saving of \$16.7 million. The Air Force request for additional or replacement equipment for various communications systems was reduced by \$10 million and Air Force operations and maintenance by \$50 million.

#### D. LOGISTICS SUPPORT

Included in this grouping is a wide variety of transportation, supply, procurement, maintenance, real property and centralized logistics activities which, while essential to the military program, cannot be readily allocated to other major programs or elements.

##### 1. Transportation

The transportation element includes the movement of cargo, freight and passengers - except for first destination transportation of cargo - by commercial carriers, MSTS, MATS, and contract airlift services. Our efforts to keep transportation costs at a minimum are discussed in Section X of this statement.

##### 2. Procurement and Supply Operations

Procurement and supply operations comprise the purchasing, storage, warehousing, inventory, inspection and material management functions performed by the Defense Supply Agency and the logistics agencies of the military departments. Again, as in the case of the foregoing item, our management efforts in procurement and supply operations are discussed in Section X of this statement.

##### 3. Industrial Preparedness

Industrial preparedness includes the provision of new industrial facilities, the maintenance and protection of idle facilities, pre-mobilization planning with private industry, and studies and investigations

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directed to ensuring the existence of an adequate production base. However, the costs of these kinds of activities which can be directly allocated to other major programs are not included in the General Support Program or shown in the amounts for this item on Table 18.

Total obligational authority for industrial preparedness in 1964 has been held to the current year level.

#### 4. Military Family Housing

Last year the Congress authorized the establishment of a Military Family Housing Management Account, permitting us to bring together in one place all funds for the construction, operation, maintenance, improvement and leasing of military family housing. Funds from 16 different fiscal year 1963 appropriations and from the unexpended balance of the Wherry Act Housing Revolving Fund are currently being administered from this management account.

This year we propose that all funds for military family housing be provided in a single appropriation with separate identification within that appropriation of the amounts for each Service. In addition to facilitating our own administration of the program, the single appropriation should also assist the Congress in its own review of the program.

A total of \$740 million is included in the 1964 budget for this program - \$250 million for construction, \$318 million for operation and maintenance, and \$172 million for principle and interest payments on indebtedness. This total is about \$33 million more than the comparable amount planned for this program in the current fiscal year.

As I told this Committee last year, we face a requirement for about 70,000 new units during the 1963-1967 period. Funds were appropriated last year for 7,500 units, leaving an unfilled need for about 63,000 units. After careful consideration, we have determined that this remaining requirement can best be met by a steady level of effort between now and 1968. Accordingly, we have programmed the construction of 12,100 new units in fiscal year 1964, and 12,500 more in each of the following four years. In addition, we are requesting \$36 million for the further acquisition and rehabilitation of Wherry housing, the improvement and minor construction of existing units, the payment of rental guaranties, and design and planning.

I believe we have made good progress in improving the management of family housing. The broadened leasing authority provided by the Congress last year should prove very useful as an economical alternative to construction of new housing, in certain circumstances. We intend to utilize the rental guarantee approach to overseas housing whenever it would lower budget costs without running the risk of having to increase our dollar outlays abroad.

[REDACTED]

A uniform cost accounting system for the operation and maintenance of family housing was put into effect last July and a new comprehensive management reporting system is now being installed to provide improved inventory, occupancy, and assignment data. We expect that these two systems will illuminate many areas of potential economy.

In order to minimize our dollar outlays abroad, we are now planning to prefabricate family housing in the United States and ship it overseas for erection there. Within the U.S. we are utilizing "relocatable" housing at remote locations to meet requirements of uncertain duration so as to minimize the risk of having to abandon permanent housing. In addition, we have a plan to test new techniques which may bring increased productivity to the housing construction industry. Finally, we are emphasizing the maximum use of standardized designs, common siting, and joint construction awards to meet the needs of the military departments.

#### 5. Materiel Maintenance

Materiel maintenance includes the costs of the major overhaul and rebuild activities for items repaired and returned to a common stock and which, therefore, cannot be related directly to military forces or weapon systems. This subject is also discussed in Section X of this statement.

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The total cost of logistic support in fiscal year 1964 will be only about three percent higher than the current year, despite sizeable increases in procurement, depot workloads, family housing units, civilian pay, etc. This has been accomplished by a vigorous program of cost reduction, discussed at length in Section X of this statement, and by a very close review of these activities during our budget review last fall.

#### E. MEDICAL SERVICES

Included in this category are medical and dental services in the U.S., and those overseas medical facilities not directly associated with military units included in other major programs. Also covered are the costs of providing medical care in non-military facilities, including the Department's MEDICARE program and such other medical activities as the Armed Forces Institute of Pathology and veterinary services.

The major variables in medical services costs are the size of the active forces, the number of military dependents, the trends of civilian medical costs, the construction program for medical facilities and the procurement of new medical equipment and supplies. Because so many of the factors controlling over-all medical costs are beyond our control, at least from the viewpoint of managing the program, we have made an especially vigorous effort to tighten up the operation and administration of the remaining parts of the program. The results of this effort are reflected in

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the fiscal year 1964 estimate which has been held to the current year's level, as shown on Table 18.

The activities of over 600 hospitals, medical centers, dental clinics, etc., account for more than 75 percent of the costs in this category. For fiscal year 1964, the average number of hospital patients per day is not expected to vary significantly from the 21,000 figure in 1963. However, we are building additions to, replacements for, or modifications of some thirty-eight inadequate or outmoded medical facilities in this country and abroad at a cost of just under \$38 million.

About 1.1 million dependents, or a little less than one-third of the total dependent population requiring medical treatment, are expected to be treated through the MEDICARE program in fiscal year 1964. The average daily patient load, the chief cost determinant, is expected to rise slightly as the average number of dependents per military man continues to increase with a concomitant rise in costs from \$73.3 million in 1963 to \$76.6 million in 1964.

#### F. COMMAND AND GENERAL SUPPORT

This aggregation is truly the "all other" category, and includes a heterogeneous assortment of essentially unrelated activities costing about \$3.4 billion annually.

##### 1. Command and Direction

Command and Direction comprises the headquarters activities of the Military Departments, the unified and specified commands, the Military Assistance Advisory Groups, data processing units, fiscal and audit activities, engineering and inspection services and a wide variety of other centralized administrative and logistical activities. The scope and cost of these activities are generally related to the over-all size and pace of the total Defense program. However, to hold costs to a minimum and to ensure efficiency we have undertaken a number of staffing and organizational studies designed to hold the numbers of personnel to austere levels. Pending completion of these studies, currently scheduled to be finished in the next few months, we have already anticipated certain savings and economies in our 1964 program and budget reviews. One example, the Services' requests for departmental administration funds in 1964 were reduced by about \$5 million, holding them to the current year's level.

##### 2. Weather Service

This program includes operating support for the aerial weather reconnaissance, air sampling activities and weather observing and forecasting systems of the Navy and Air Force. This activity has been held to approximately the 1963 level.

### 3. Air Rescue/Recovery

The air rescue and recovery program of the Air Force comprises the Air Rescue Service (MATS), which at present maintains and operates 7 Rescue Coordination Centers, 11 air rescue squadrons and 75 local base rescue detachments.

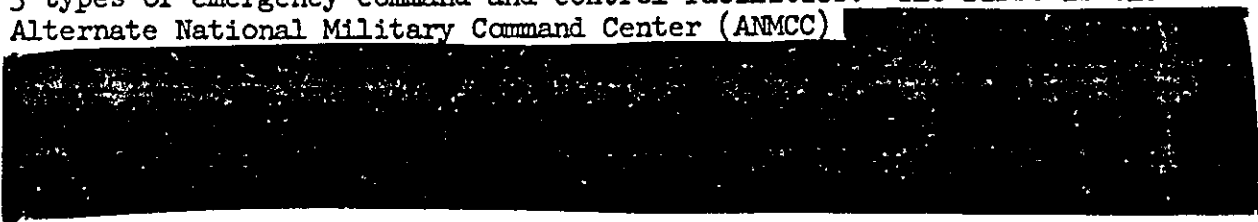
At the end of the current fiscal year, the air/rescue fleet will consist of 11 squadrons comprising 65 aircraft (29 HU-16's and 36 HC-54's). By the end of fiscal year 1964, we plan to add to the fleet a squadron of 28 KC-97's which will become available as a result of continuing deliveries of KC-135's. Eventually, we hope to replace both the KC-97's and the HC-54's with HC-130's. To this end, we are proposing the procurement during fiscal year 1964 of 30 HC-130E aircraft and the long lead time items required to support a fiscal year 1965 buy of 33 more. This is the major reason for the increase in the 1964 cost in this item.

### 4. National Emergency Command Posts


The amounts shown on Table 18 cover the costs of the Alternate National Military Command Center, the National Emergency Command Post Afloat (NECPA) and the National Emergency Airborne Command Post (NEACP) - all integral parts of the World-Wide Military Command and Control System (WWMCCS).

The National Military Command Center, for the support of the national authorities, the Secretary of Defense and the Joint Chiefs of Staff, which I mentioned earlier, is the senior element of the National Military Command System and, as such, has certain unique functions not required of the emergency command posts: it is responsible for the exercise of the over-all system; and it must support both cold war and limited war operations in contrast to the alternate centers, which are essentially oriented to general war.

As alternates to the National Military Command Center, we maintain 3 types of emergency command and control facilities. The first is the Alternate National Military Command Center (ANMCC)



The second alternate is the National Emergency Command Post Afloat (NECPA). We now have in the fleet one cruiser type, the Northhampton, which has been converted to use as a command ship to provide an interim capability for a seaborne alternate command post. Two mothballed CVL hulls are now being converted to command ships and the first should join the fleet before the end of the current fiscal year. The second will join during



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1964, relieving the Northhampton. We plan to maintain these two ships through 1971.

The third alternative capability is the National Emergency Airborne Command Post. Presently, we are maintaining a fleet of 3 NEACP aircraft (modified KC-135's), one of which can be kept airborne at all times during an emergency to provide an alternative command post, a communications link for the command system itself, or visual reconnaissance of post attack conditions in key areas such as Washington.

The cost of the National Emergency Command Posts will decline in 1964, reflecting the completion of funding of the command ship conversions in 1963.

#### 5. Transients, Patients and Prisoners

The next item, Transients, Patients and Prisoners, reflects the cost of the temporarily non-effective portion of the total military personnel force. These amounts are determined by forecasting the numbers of personnel in transient status based upon projected personnel movements and statistically projecting the numbers of patients and prisoners on the basis of experience trends.

#### 6. Construction Support Activities

The next item, Construction Support Activities, includes the cost of minor construction, restoration of damaged facilities, construction of access roads, advanced planning, construction design and architectural services. During our budget review last fall, we took action to reverse the trend of recent years toward increased minor construction programs, (one of the elements of this item) cutting the Service estimates by about 40 percent, from \$52 million to \$31 million which will bring the 1964 minor construction program \$8 million under the current year.

#### 7. DEEP FREEZE

Operation DEEP FREEZE is the U.S. scientific effort in Antarctica, sponsored by the National Science Foundation, with logistic support provided by the Navy. Since its inception in fiscal year 1958, both the scope of scientific activity and the annual operating costs of this project have grown steadily, a reflection of our national policy to maintain a "leading position" in that area.

In support of DEEP FREEZE, the Navy now provides one radar escort ship (DER) for weather service, search and rescue, and air navigation; two ice-breakers (AGB); and one air squadron consisting of 23 aircraft of various types. We propose to continue to support these same forces throughout fiscal year 1964, but with no increase in costs, estimated at \$29 million per year.

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## 8. Other Command and General Support Activities

The amounts shown on the Table for this item reflect a wide variety of activities including recruiting and examining, personnel centers, criminal investigation detachments, welfare and morale services, disciplinary barracks, finance and audit services, promotion of rifle practice, the Naval Observatory, international activities, pictorial services, etc. Also included in the amount shown and accounting for a very large part (over \$200 million) of the increase in 1964 is the cost of classified activities.

## G. DEFENSE ATOMIC SUPPORT PROGRAM

The Defense Atomic Support Program comprises the activities of the Defense Atomic Support Agency (DASA), and those elements of the Military Services having responsibility for providing specialized staff assistance to the Secretary of Defense and the Joint Chiefs of Staff, operational and training support to the Services, monitoring the AEC's atomic weapons development programs, planning and conducting nuclear weapons effects tests and managing the national atomic weapons stockpile. The production and funding of fissionable material is, of course, the responsibility of the AEC.

Nuclear weapons operation and training activity is programmed at about the same level as prior years. DASA maintains national atomic stockpiles at five sites, where nuclear weapons are kept in a high state of readiness. DASA also operates the atomic weapons school at Sandia Base, New Mexico, assists the Services in their atomic weapons training and provides emergency teams prepared to cope with nuclear accidents. About 5,000 military and civilian personnel of the Defense Department are engaged in these activities.

DASA's research program is composed of 3 distinct but complementary parts: nuclear weapons development, nuclear weapons effects research, and nuclear weapons effects tests. Nuclear weapons development is devoted to the investigation of the effect of various enemy actions, accidents and natural phenomena upon the nuclear weapons themselves. Conducted in collaboration with the Atomic Energy Commission, the fiscal year 1964 program will be directed to the effects of fire, fragmentation, impact and electromagnetic radiation on nuclear weapons. This activity also provides for the centralized coordination between the Department of Defense and the AEC with respect to all technical matters, including the design of nuclear weapons, in conformance with military requirements.

Nuclear weapons effects research comprises all research other than full-scale tests of the effects of nuclear weapons on various targets including investigation of: air blast effects on ground equipment and aerospace systems; nuclear radiation; underground protective structures; biomedical phenomena; water blast and shock effects; electromagnetic phenomena; fallout and residual radiation; thermal effects, etc. The fiscal year 1964 program will support a broad and varied research effort



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at about the same level as the current year.

Nuclear weapons effects tests comprise the major portion of Defense's share of the full-scale AEC-DoD nuclear testing program. The latest series of atmospheric tests has been completed and there presently exists no specific schedule for future atmospheric tests. Nevertheless, we do not intend to let our capability for effects testing fall into disrepair and, to protect this potential, we have programmed \$30 million for this purpose in fiscal year 1964 - a reduction of \$62 million from the current year's funding. If circumstances should dictate a resumption of full-scale testing, the additional financial requirements could be met from the Emergency Fund.

Total obligational authority for the Defense Atomic Support Program in fiscal year 1964 is estimated at \$115 million, compared to \$182 million in the current fiscal year, as shown on Table 18.

#### H. MISCELLANEOUS DEPARTMENT-WIDE ACTIVITIES

Miscellaneous Department-wide Activities include the management and staff advisory functions of the Office of the Secretary of Defense and the Organization of the Joint Chiefs of Staff; Departmental-wide funding for claims; a contingency fund for military purposes controlled by the Secretary of Defense; and the Armed Forces Information and Education Program.

##### 1. Contingencies

For many years, now, Congress has provided certain funds which may be used for confidential military purposes in unusual, unexpected situations, when speedy, but secret, action is required. Although use of these funds is authorized by the Secretary and accounted for solely on his certificate, Congress is kept currently informed as to the status of these funds. In fiscal year 1962, \$13.3 million of the total of \$15 million appropriated was obligated, and in 1963 we estimate that all of the \$15 million appropriated will be used. For fiscal year 1964, we are requesting \$15 million, the same amount as provided in former years.

##### 2. Claims

The appropriation for Claims provides for the payment of all non-contractual claims against the Department of Defense. The estimate of \$19 million shown for fiscal year 1964 is the same amount appropriated for the current year.

##### 3. All Other

The Armed Forces Information and Education Program, which provides world-wide radio, television and press services, together with a program designed to promote a broad understanding of national goals and purposes, will be continued in fiscal year 1964 at about the same level of activity

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as the current year, at a cost of about \$4.4 million.

Total obligational authority for the Secretary of Defense's own staff will also be held to the current year's level. In the case of the Joint Chiefs of Staff, a proposed reorganization would require a modest expansion of the support staff. Also included in the amount shown for this item on Table 18, is \$20 million which would be transferred to the Treasury Department for LORAN stations to be operated by the Coast Guard.

\* \* \* \* \*

Total obligational authority for Department-wide Activities in 1964 will be \$117 million compared to \$113 million in 1963, as shown on Table 18.

#### I. RETIRED PAY

The average number of retired military personnel will rise in fiscal year 1964 to about 411,000, an increase of about 51,000 over the estimate for the current fiscal year and a continuation of a trend that should see the retired rolls reaching nearly 646,000 by the end of fiscal year 1968. The cost of retired pay in fiscal year 1964, at current rates, would amount to \$1,163 million, an increase of \$134 million over the current year. However, this Administration has prepared two legislative proposals on retired pay, which I will discuss later, that would have the effect of raising this sum rather substantially.

#### J. OTHER "ACROSS-THE-BOARD" SUPPORT TYPE MATTERS

There are two other matters, cutting across the major programs, which I would like to discuss at this point.

##### 1. Mission Support Aircraft

The mission support fleet now includes about 3,900 aircraft of various types and models which are assigned to specialized missions such as proficiency flying, high priority personnel and cargo transport, attaché support and certain intelligence purposes.

Recognizing the need for modernization and in view of the expressed interest of Congress in a coordinated procurement program for all the Services, my own staff, working with the military departments, recently completed a study of the entire mission support requirement. However, because of the large number of tactical aircraft in the 1964 program, the desirability of spreading future aircraft procurement over a number of years, and the over-all size of the 1964 budget, we decided to defer for another year the initiation of the mission support replacement program. This will also give us more time to double-check our needs and ensure a

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soundly conceived, thoroughly coordinated aircraft procurement program.

## 2. Over-all Civilian Employment Levels

Last fall, in signing the civilian pay legislation, the President expressed his desire to limit the number of Federal employees to the absolute minimum necessary to get the public business done.

In their original 1964 budget estimates (for military functions), the Services requested about 47,000 more civilian employees than now planned for the end of the current fiscal year. (The planned end 1963 level is about 5,000 lower than end 1962.) During the budget review, this request was cut by about 36,000. Then, in keeping with President Kennedy's directive, a further reduction was assessed, bringing the anticipated end fiscal year 1964 civilian personnel strength (for the military functions) of the Department of Defense to 1,019,111 - a reduction of about 57,000 from the Service requests and about 15,000 lower than the June 30, 1962 strength. This represents total reductions of \$246 million from the Services' original estimates as a result of all budget review actions and \$67 million as a result of this across-the-board cut alone.

## K. FINANCIAL SUMMARY

The General Support Program I have outlined will require Total Obligational Authority of \$14.6 billion for fiscal year 1964 compared with \$13.7 billion for fiscal year 1963, \$12.7 billion for fiscal year 1962, and \$12.3 billion in the original budget estimate for fiscal year 1962.

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## IX. CIVIL DEFENSE

Although Civil Defense is presented as a separate program, it is actually an integral part of our over-all defense posture and its size and character are intimately related to those of our defensive forces. Indeed, as I noted earlier, in some wartime situations a reasonable Civil Defense program could do more to save lives than many active defense measures. To cite just one example, the effectiveness of an active ballistic missile defense system in saving lives depends in large part upon the availability of adequate fallout shelters for the population.

Last year I stated to the Committee that a sound Civil Defense program for the period ahead should provide:

1. A system of shelters equipped and provisioned to protect our population from the fallout effects of a nuclear attack.
2. Organization and planning of emergency actions to carry out decontamination, fire-fighting, rescue and reconstruction necessary to restore a functioning society, as well as warning to alert the civilian population to imminent attack.

We presented at that time a well-rounded and comprehensive program to achieve these objectives over the next 5 or 6 years. Although the Congress did appropriate funds for some of the important elements of this program, neither funds nor authorizing legislation were provided for Federal shelter incentive programs or for shelters in Federal buildings. Moreover, the amount of funds provided for the stocking of existing shelters was inadequate.

In the light of the critical reception accorded this program by the Congress last year, we have again thoroughly examined its concepts, requirements, costs and phasing. Our conclusion is that fallout shelters for the population are absolutely essential to enable us to face the consequences of a nuclear war which might be forced upon us. One might argue with the pace of the program, the type of shelters to be provided, or how they should be financed, but we believe there should be no argument as to their need. Accordingly, we are now proposing a revised program which is essentially the same in character but different in phasing and emphasis.

Basically, there are four sources from which we hope to attain our ultimate goal of fallout shelters for the entire population. These include:

1. Completely independent private initiative, reflected in the thousands of homeowners and business organizations which have undertaken measures for fallout protection.

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2. Installation by the Federal Government of such facilities in its own buildings for Federal employees and others.
  3. The national survey, marking and stocking program.
  4. The shelter incentive program, designed to encourage private ingenuity in low-cost shelter building through Federal financial assistance.

The first source, independent private initiative, while least expensive to the Federal Government, is not expected to yield more than 50 million spaces through the end of fiscal year 1968. The second source, providing the Congress authorizes the required work and appropriates the required funds, would yield perhaps another 5 million spaces. The third source, which is already being intensively exploited, could yield as many as 80 million or more spaces by 1968, at a relatively small cost (approximately \$4) per shelter space. The fourth source, which for the Federal Government would be the most expensive per shelter space, except for shelters in Federal buildings, would still be needed to make up the balance of the 240 million spaces we estimate will be needed for the entire population.

#### A. SHELTER SURVEY, MARKING AND STOCKING

Because the National Shelter Survey Program produces such a large return in shelter spaces for the cost involved, we will continue to give this element of the shelter program first priority during the current fiscal year. Accordingly, we are requesting a 1963 supplemental appropriation of \$61.9 million to complete the stocking of about 70 million spaces. The survey has located shelter space for over 100 million people which will provide a minimum protection factor of 40 or better and a median protection factor of 150. Funds requested for provisioning are based upon minimum estimates of the amount of surveyed shelter space which will be made available as public shelter by agreement between the building owners, the local government and the Defense Department. The decision was taken to make use of shelter space with protection factors of between 40 and 100 as a result of studies which showed that better than 90% of the occupants of shelters with a protection factor of 40 would have adequate protection against radiation intensities anticipated from attacks considered possible over the next few years. This decision provided a better distribution of surveyed shelter space, particularly in the South and less populated areas, where heavily constructed buildings with basements are scarce.

The \$7.8 million requested for fiscal year 1964 will continue the survey work and marking, adding shelters to the National inventory as new buildings are erected. This updating of surveyed shelter will continue in the future.

Fifty-eight thousand of the buildings covered by the survey have been made available by their owners for public shelter use, without compensation.

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Of these, about 13,000 buildings capable of sheltering 10 million people have been marked. Both the licensing and marking of shelter space have been moving at a sharply accelerated pace since the Cuban emergency.

The major portion of this shelter space is located in urban areas and, allowing for the night-time, daytime and transient population requirements, would accommodate over half of the urban population. The cost of surveying, marking and stocking these spaces averages about \$3.30 per shelter space.

#### B. SHELTER FINANCING PROGRAM

If suitable fallout shelters are to be provided for all of our population, we will have to undertake an extensive effort to incorporate protective features in both new and existing structures, such as schools, hospitals and other non-profit institutions to create new shelter space where it is needed. We estimate that the cost of such shelters would average about \$40 per space for the total program.

Although schools, hospitals and other community facilities are well located in relation to the population distribution and are well organized with responsible leaders and orderly procedures around which an emergency Civil Defense capability can be developed, these institutions have limited resources to devote to shelter construction. This is particularly true in low-income communities. Accordingly, some form of Federal assistance will be required.

To meet this need, we again propose a Federal shelter financing program which would take the form of an allowance not to exceed \$25 per shelter space or the actual cost, whichever is less. Where the cost exceeds \$25 per space, the excess would have to be borne by the recipient of the Federal payment. We believe that this ceiling on the Federal contribution would stimulate ingenuity in developing low-cost fallout protection in existing or new buildings.

In fact, the first phase of this program would exploit the low cost opportunities disclosed by the shelter survey. By using the engineering estimates developed in the course of the survey for low cost modifications, shelter improvements could be made at costs below the \$25 per space proposed as a maximum federal payment. Thus, most of the proposed FY 1964 shelter financing would be used for minor low-cost modifications of existing buildings and the alteration of designs of new buildings.

To qualify, shelters financed under this program would have to be open to the public in time of emergency, provide at least 500 square feet of usable area and be approved by the Department of Defense as to need, location and design.

A total of \$175 million is included in the fiscal year 1964 budget for this program. These funds would accomplish several purposes. About 10 million

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shelter spaces could be generated in places where additional shelter is needed to supplement those found by the survey. A transition would be provided between current activities to locate and bring into use existing shelter space and the eventual task of finding a way for each community to meet its own shelter deficiency. Most of these funds would finance minor improvements of existing buildings and in the designs of new buildings, as I noted earlier. The shelter financing program would make possible early decisions on the necessary improvements.

These funds would also enable us to broaden the experience of the first two years with the new civil defense program; to provide information on community responses to the shelter problem, on costs, on private and local sources of financing; and would permit us to organize community-wide long-term plans to develop complete shelter systems. Two years of experience in exploiting low-cost opportunities to develop local shelter systems, making the most of structures not intended primarily for shelter purposes, would provide the Defense Department and the Congress with a better basis to assess and meet the higher cost shelter requirement then remaining.

#### C. SHELTER IN FEDERAL BUILDINGS

If we are to ask private firms and institutions to provide shelters for their employees and the general public, the Federal Government should certainly be prepared to do the same. Accordingly, we are once again requesting authorization and funds to provide fallout protection in Federal Government civilian and military facilities.

The \$17.5 million obligated during fiscal year 1962 for non-military structures constituted the first step in that program. These funds will provide 500,000 spaces in more than 700 structures at an average cost of less than \$32 per space. For fiscal year 1964, we are requesting \$20.0 million to provide about 350,000 spaces in Federal post offices, courts, other non-military buildings, and suitable buildings on military installations, and for the construction of six additional protected regional centers.

#### D. WARNING AND DETECTION

##### 1. Warning and Alert

Timely warning is as essential to the effectiveness of a fallout shelter as it is to that of a SAC bunker. In recognition of this fact, we have programmed \$4.5 million for the fiscal year 1964 increment of the National Emergency Alarm Repeater (NEAR) system. This system would provide almost instantaneous nationwide warning to every home, office and factory served by electric power. Indications of impending attack would be picked up by the various early warning networks, transmitted to Air Force Sector Headquarters, and when an indication is verified, the NEAR system would be activated, thereby providing warning throughout the country.

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The NEAR system works by transmitting a special power pulse over utility lines into individual homes, offices and factories, where the pulse activates small plug-in receivers. The indoor warning thus provided would supplement existing state and local outdoor warning systems.

Through fiscal year 1963 \$8.6 million was provided for NEAR to develop and test prototype generators and receivers and install six NEAR generators in selected utility systems for system-wide engineering evaluation. The \$4.5 million in the fiscal year 1964 program will provide for further system-wide installation and final test-evaluation. Until these final results are known it would be premature to estimate costs and methods of financing.

## 2. Monitoring Radiological Fallout

Nearly as crucial as knowing when to take cover in a fallout shelter is knowing when to come out, and for how long. In the postattack period, accurate and timely information on radiological hazards would be needed to:

- (1) warn people of the presence of fallout and advise them on countermeasures;
- (2) provide technical guidance to the nation's leadership at all Governmental levels;
- (3) provide guidance for emergency operations;
- (4) determine the amount of contamination of essential industrial and agricultural facilities;
- and (5) apply effective decontamination procedures.

More than 33,000 Federal, State and local stations have already been equipped with radiological monitoring instruments. Our goal for 1964 is to complete the equipping of an additional 40,000 surface monitoring stations, all of which will be capable of mobile, as well as fixed, station monitoring. Our ultimate goal is to equip 150,000 such stations. We are requesting an additional \$3.5 million for procurement, warehousing, calibration and maintenance of radiation monitoring instruments.

## E. COMMUNICATIONS AND CONTROL

This element, for which we are asking \$4.5 million, includes protection of 300 key broadcasting stations to assure a capability for emergency communications with the public, and improvement of damage assessment data-collection facilities, including computer support.

## F. TRAINING, EDUCATION AND PUBLIC INFORMATION

We have included \$20.5 million in the 1964 program for training, education and public information. Major strides have been made in this area. Nearly 6,000 training instructors have graduated in the past year from the three civil defense schools, and specialists and instructors are now being trained at the rate of 8,000 per year. In addition, 19 training films in shelter management and radiological defense have been or will soon be completed, and will be distributed throughout the country.



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Three months ago, in response to the Cuban crisis, we stepped up the pace of our training program by the distribution of shortened, intensified courses for local civil defense personnel. By January, an estimated 4,000 persons had completed short courses in radiation monitoring and shelter management.

In the aftermath of the Caribbean crisis, a concerted program has been undertaken in cooperation with the Department of Agriculture for the benefit of the rural population. The Agricultural Extension services will accelerate guidance to farm families and rural communities in protecting themselves and their livestock and crops from radiological hazards, using technical and training materials specially prepared for rural civil defense requirements.

As of January 1, 2,800 architects and engineers had completed the two-week course in fallout shelter analysis which is given in each of the eight Civil Defense Regions. Within the next year, we shall expand this part of our program to include evening courses, correspondence courses and special summer workshops for those architects and engineers who could not otherwise attend. A shorter orientation course was initiated after the Cuban crisis, which has been attended by an additional 9,000 professionals and construction industry personnel.

During fiscal year 1963 it is estimated that 700,000 persons will be trained in civil defense in adult education courses given in all fifty states. This will bring the total number so trained to more than 1.1 million. In 1964, it is estimated that an additional 1.0 million will receive this training.

A medical self-help training program was initiated late in FY 1962, jointly with the Public Health Service and the American Medical Association. Through end-1963, it is estimated that 140,000 people will be trained in this program. In 1964, it is anticipated that an additional 300,000 persons will attend these courses.

#### G. FINANCIAL ASSISTANCE TO STATES

We recognize that the success of the Federal program depends largely on the ability of the state and local civil defense organizations to develop and organize the program in each community. In the light of this fact, Federal funds are contributed to states for emergency operating centers, civil defense supplies, equipment, facilities and training on a dollar-for-dollar matching basis.

Slightly more than half of the \$33 million requested for this purpose is intended for personnel and administrative expense. Pre-emergency planning and training by the states and their political subdivisions requires sizeable numbers of capable people, and we are convinced that Federal aid has brought about significant increases in operational capability at all levels.

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Ten million dollars is required for emergency operations centers. There are now 28 state and local government emergency operations centers completed and 25 additional centers are being constructed; an additional 42 are in the design phase. Finally, \$5 million is included to match the costs of civil defense supplies, equipment and training.

#### H. RESEARCH AND DEVELOPMENT

We are requesting \$15 million in the 1964 budget for civil defense research and development. Much of this work is conducted in conjunction with other elements of the Defense Department. For example, important data on fallout particles and patterns were gained from last summer's "Small Boy" test shot conducted under the auspices of the Defense Atomic Support Agency, and considerable research on decontamination problems is being done by the Naval Radiological Defense Laboratory in San Francisco.

For fiscal year 1964, our program includes work on shelter design and construction, fire, support systems, post-attack activity and systems evaluation.

#### I. MANAGEMENT

We are requesting \$15.7 million for the over-all management of the national Civil Defense program, compared with \$13.6 million provided for the current fiscal year. The increase of \$2.1 million is largely due to the civilian pay raise enacted by the Congress last year.

#### J. FINANCIAL SUMMARY

The Civil Defense Program I have outlined will require Total Obligational Authority of \$300 million in fiscal year 1964 compared with \$173 million in fiscal year 1963 and \$252 million in fiscal year 1962.

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In summary, I believe that a very considerable amount of progress was made in the past year. We have laid a firm base from which to move on to the difficult task of financing low-cost development of new shelter space. The past response of building owners to the use of their buildings and the training of their employees augurs well for this next stage of the program. The survey data provide, for the first time, a sound foundation from which to plan more effective programs, both for the nation and for each community. The nature of the civil defense problem throws the main burden of leadership squarely on the Federal Government. I strongly urge that the members of this committee support the necessary authorizing legislation and appropriations.

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## X. ORGANIZATION AND MANAGEMENT

The organization and management of so vast and diverse an undertaking as the Defense program presents a problem unique in the Government, if not in the nation at large. As I noted last year, there are at least several possible ways in which to organize the Defense effort, each with its own peculiar strengths and weaknesses. In fact, the Defense Department is actually organized and managed in many different ways to perform its various tasks and missions. The principal operating subdivisions for the day-to-day administration of personnel, research and development, procurement, logistics, etc., are assigned to the three Military Departments, reporting directly to the Secretary of Defense. Most of the operational combat forces are organized in unified and specified commands, reporting to the Secretary of Defense through the Joint Chiefs of Staff, who are also the principal military advisors both to the Secretary of Defense and the President, and the executors of their orders to the combat forces.

For certain functions common to all of the Military Departments, there have been established over the years a number of what we now call "Defense Agencies", such as the Defense Atomic Support Agency, the Defense Intelligence Agency and the Defense Supply Agency. These agencies report to the Secretary of Defense either directly or through the Joint Chiefs of Staff. The Secretary of Defense's own staff is organized by fields of specialization - Research and Engineering, Installations and Logistics, Manpower, International Security Affairs, Comptroller, etc. Finally, we receive and administer appropriations in terms of functional categories: military personnel, operation and maintenance, etc., while we plan in terms of military missions, i.e., strategic retaliation, continental air defense, etc.

To some extent, these different forms of organization and management are the results of historical circumstance, but for the most part they have evolved to meet specific needs. Yet all of these diverse organizations, programs and activities have to be tied together and directed toward the accomplishment of the single overriding objective -- the defense of the nation.

For this purpose, we have introduced the new planning-programming-budgeting system. It is through this system that we look at the Defense effort as a whole. Major program priorities can be meaningfully determined only in terms of the total program, and a proper balancing of all the elements of the Defense effort can only be achieved at the Department of Defense level. For example, the size of the POLARIS force cannot be determined in terms of the Navy shipbuilding program or even the entire Navy program, but can be validly judged only in relation to all of the other elements of the Strategic Retaliatory Forces - the B-52's, the ATLAS, the TITAN and the MINUTEMAN ICBM's. Similarly, the requirement for Air

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Force tactical fighters cannot be determined independently of the requirement for Army ground forces. All such interdependent decisions must be made at one place in the Defense organization, and in this process the Joint Chiefs of Staff and the Secretary must play a major role. Alone among the elements of the Department, they have the over-all vantage point from which to reach sound recommendations on balanced military forces.

While I believe that unified planning, programming, and decision-making are indispensable to the effective management of the Defense effort, I am equally convinced that the actual operation of the program should be managed, to the maximum extent possible, on a decentralized basis. The Defense effort is entirely too big, too complex and too geographically dispersed for its operations to be managed from a single, central point.

Thus, the organization and management of the Defense Department must be based on the principle of centralized planning and decentralized operation.

#### A. ORGANIZATIONAL CHANGES

The organizational changes which we have made during the last year, while important, have been essentially outgrowths or refinements of those I previously reported to you. These changes have been directed toward five basic objectives: (a) to bring all combat-ready forces under the operational control of the Joint Chiefs of Staff and the Secretary of Defense; (b) to increase the combat capabilities of the operational forces; (c) to improve the effectiveness of support for those forces; (d) to obtain greater efficiency and economy; and (e) to strengthen the decision-making process.

##### 1. Strike Command

With the creation of the U.S. Strike Command - composed of units from the Strategic Army Corps and the Tactical Air Command - almost all our nation's combat-ready forces are now assigned to either unified or specified commands. During the last year, the Strike Command has improved its organizational structure and has gained experience through day-to-day operations and the conduct of joint training exercises. The number of combat-ready Army divisions available to the Strike Command has been increased from three to eight. Recent events have confirmed our judgment that the Strike Command has greatly improved the responsiveness of the Defense establishment to a variety of military contingencies and has added considerable flexibility to the employment of combatant forces.

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With the assignment of the operationally ready forces to unified and specified commands, it became apparent that the capability for communications and intelligence - essential elements of command and operations -

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must be brought under the control of the operational side of the Department of Defense and not treated as logistical support services to be furnished to the component elements of such commands by the separate military departments. To this end, two Defense-wide agencies - the Defense Communications Agency and the Defense Intelligence Agency - were created under the Joint Chiefs of Staff.

## 2. The Defense Communications Agency

When this Agency was originally established by Secretary Gates in 1960, its function was to manage the Defense Communications System which then consisted of the long-haul point-to-point telecommunication lines. During the past year, the scope of the Defense Communications Agency's responsibilities has been increased so that the Agency is now responsible for the technical development and technical support of the National Military Command System and for the communications support of the World-Wide Command and Control System and for the integrated development of the military telecommunications satellite system and the White House Communications Agency. In recognition of the fact that the Director, Defense Communications Agency, is now the chief communications-electronics officer in the Department of Defense, he has been assigned the responsibility of chairing the Military Communications-Electronics Board, which coordinates some of the communications-electronics activities remaining in the military departments as well as similar activities of the unified and specified commands.

## 3. Defense Intelligence Agency

During the past year the Defense Intelligence Agency has continued to make satisfactory progress as the agency responsible for all Washington-level intelligence functions in the Defense Department. It has assumed responsibility for the over-all management and direction of mapping and geodesy and technical intelligence, with the work in these areas being performed in the military departments or in the unified and specified commands. The Defense Intelligence Agency is now in the process of assuming the military intelligence production functions which had previously been fragmented among the three military departments. We are convinced that this step will result in more responsive and better over-all intelligence coupled with significant manpower and administrative savings. Intelligence support to the unified and specified commands and the JCS will be greatly improved.

## 4. Army

Last year I reported to you in some detail on our proposal for reorganizing the Army, particularly with respect to the activities of the technical services. Today I am happy to report that the transfer of the functions performed by the technical services to the three new major Army commands has been virtually completed, with a considerable reduction of operational complexity and administrative overlapping.

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5. Air Force

The successful realignment of Air Force responsibilities for research and development, production, procurement, and distribution between the Air Force Systems Command and the Air Force Logistics Command has been completed. The Air Force has recently completed a study of the organization of the Air Staff and is now taking action to realign responsibilities and functions, so as to more clearly fix responsibilities and to eliminate overlap and duplication.

One function of the Systems Command, missile site activation, clearly manifests the overriding importance of interservice coordination and cooperation in today's Defense establishment. To improve the management setup for missile site activation, Army and Air Force capabilities are integrated in both the construction and activation stages. In line with this new approach, an Army general officer holds a major staff position, associated with the missile site activation program, in the field structure of the Air Force Systems Command. This integrated approach has greatly enhanced speed and efficiency in the construction and activation of critical missile launch facilities.

6. Navy

Like its sister departments, the Department of the Navy, too, is now reappraising its organizational framework and management practices. An over-all management study ordered by the Secretary of the Navy has just been completed, and I expect his recommendations shortly.

7. Defense Supply Agency

In the months that have elapsed since the establishment of the Defense Supply Agency, it has assumed control of the common supply management activities entrusted to it at a rate of exceeding our expectations, and today it constitutes an important segment of the Defense logistics establishment. The Cuban crisis provided an excellent basis for evaluating the Agency's responsiveness under emergency conditions. Notwithstanding the suddenness with which the crisis arose and the relative youth of the Agency, its performance was excellent.

A reduction of almost 3,550 civilian positions for functions which were transferred from the military departments to the Defense Supply Agency has already been effected and about another 800 spaces will be eliminated in fiscal year 1964. By the end of the current fiscal year the Defense Supply Agency will have taken over the management of all assigned commodities and services except electronics supplies. Assumption of responsibility for the latter is currently scheduled for completion in June 1964. Including electronics, the number of items managed by the Defense Supply Agency will exceed 1,000,000 and further integrated management assignments have recently been made for industrial production equipment and chemical supplies.

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Working in coordination with the military departments, the Defense Supply Agency has developed plans for a distribution system which when fully activated will provide for quicker, more efficient service to its customers at considerably less expense.

But in our efforts to obtain efficiency through consolidation of the management of common supplies and services we have not restricted ourselves to Defense agencies alone. Whenever it has been deemed more economical to delegate the performance of functions to Government agencies other than Defense, with no loss in effectiveness, we have not hesitated to do so. Thus, the General Services Administration buys for us about \$350 million worth of common-use items per year, and I have directed that the services of GSA be used wherever that agency can do the job more efficiently than our own organization.

The test of whether we should do a job ourselves or have some other agency do it for us must be that of cost and effectiveness. And that is precisely the test we are applying within the Defense Department.

#### 8. Single Manager Training Responsibilities

The single manager approach which has proved so successful in the logistics area has now been extended to the training function. In view of the steadily increasing importance of language training throughout the Defense Department and its growing cost, it is essential that the curriculum and classroom techniques be standardized and brought up-to-date, and training requirements be considered on a Department of Defense-wide basis. The Secretary of the Army, acting through the newly established Defense Language Institute, has been given responsibility for all DOD foreign language training. The Institute will set academic standards and supervise classes and facilities for both part-time and full-time foreign language instruction in the United States and overseas. It will be staffed by both civilian and military experts from all Services.

A similar step has been taken in the important area of intelligence, and photo and infrared interpretation training. Defense-wide responsibility for advanced air intelligence training has been assigned to the Secretary of the Air Force.

The Defense Intelligence Agency has been given responsibility for the establishment of a new Defense Intelligence School. This new school, will consolidate attache and advanced intelligence officer training. Previously, separate schools had been maintained by the military departments although the courses of instruction in these schools were basically the same.

#### 9. The Joint Chiefs of Staff Organization

The JCS plays a key role, not only in the planning of the Defense program, but in its execution as well. The workload of this organization

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has been increasing steadily in recent years and some realignment of available resources may be needed. The problem is now under study.

**B. FIVE-YEAR COST REDUCTION PROGRAM**

With respect to the management of our materiel resources we have, during the past year, launched a formal five-year cost reduction program which has as its objective the reduction of procurement and logistics costs through improved management practices. Specific quantitative cost reduction goals have been established for each of the principal areas of logistics management. Selected goals, in turn, have been established for the military departments and Defense agencies (i.e., DSA and DCA) so that our key logistics managers know exactly what is expected of them. These goals are admittedly ambitious and will be achieved only if all management levels in the Defense Department give them continuing, high priority attention. Accordingly, the Service Secretaries and Agency heads have been directed to make a monthly or quarterly review of progress achieved and to report the results to my office.

The current cost reduction goals are summarized in the first three columns of Table 20. The last two columns show the goals reported to the President last July. Management improvement actions instituted in fiscal year 1962 and planned for fiscal year 1963 should ultimately produce annual savings of about \$1.9 billion. Our goal for end fiscal year 1965 is to initiate actions which will increase the rate of savings to over \$3.4 billion per year. These are more ambitious goals than those reported to the President, but I believe that they can be achieved with a real effort on the part of all concerned. At any rate we intend to make the try.

As shown on Table 20 we have grouped the cost reduction goals under three main headings:

**1. Buying Only What We Need**

**a. Refining the Requirements Calculations**

The most strategic time for ensuring that we buy only what we need is obviously when we compute our requirements for end items and supporting parts and supplies.

(1) **End Item Requirements:** What weapons to acquire and what force levels to support are program decisions and are not included in this cost reduction program. However, significant opportunities for cost prevention exist in our requirements computations, i.e., making certain that end item requirements do not overstate pipeline transit times, replacement and consumption factors, or understate the post D-Day production potential. For example, in the case of the M-88 tank recovery vehicle, we found that by using a pipeline factor of 55 days, which the Army considers fully adequate,



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instead of the standard 120-day transit pipeline factor previously used, we could save \$12.5 million. In total, Army requirements, including full combat support, have been reduced by approximately \$536 million in fiscal year 1964 through re-evaluation of pipeline requirements and post D-Day production potential, as shown in footnote e/ to Table 20. These studies are continuing in all Services and should result in further substantial reductions in end item inventory requirements.

(2) Requirements for Parts and Supplies: We now have almost four million items of this type in the supply system to support our troops and weapons systems. Each year we add several hundred thousand new items to our inventories and reorder approximately half of the items already on hand to meet peacetime consumption and balance out our mobilization reserve stocks. Current information regarding stocks on hand and their rates of usage must be maintained at over 1,000 installations, world-wide. The sheer magnitude of this task, and the natural tendency of each echelon to add safety factors to its stock requirements in order to avoid "deadlining" vital weapons, tend to inflate inventory levels. To offset this tendency, we are attempting to achieve more current and precise control of inventory levels through more effective use of electronic computers and high-speed communications systems, uniform application of the economic order quantity principle, concentration of inventory managers' efforts on high value items, and elimination of unnecessary safety factors from requirements computations. On the basis of reforms in the management of spare parts during the first two years, and further improvements we intend to achieve, we have been able to reduce the level of funds requested in the fiscal year 1964 budget by \$608 million. The largest portion of this reduction was in aviation and missile spares, engines and electronics items.

These actions, to be initiated in the fiscal years 1962 through 1965, to tighten inventory controls as well as to reduce the costs of manuals and technical data procured to operate and maintain new weapons systems, should produce recurring annual savings of about \$790 million, as shown on Table 20.

b. Increased Use of Excess Inventories

Another step being taken to ensure that we buy only what we need is to utilize more fully the equipment and supplies already on hand. The continued existence of large excess and long supply stocks, currently valued at \$13 billion, has long been a matter of great concern to both the Congress and the Department of Defense. Tighter controls over requirements calculations should greatly reduce the generation of future excess materiel, but several years will be required to utilize or dispose of present stocks. Moreover, we will never be able to eliminate such excesses completely because of the dynamic character of weapons technology.

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While we have been utilizing annually about 8 percent of the excess and long supply inventory to satisfy stock deficiencies, our studies indicate that we should be able to use even more. In fiscal year 1962, we increased the re-use of excess stocks by \$124 million over the fiscal year 1961 level. By the end of fiscal year 1963 we expect to be re-using more than \$200 million of excess stocks per year in lieu of new procurement. Our goal by the end of fiscal year 1965 is an annual rate of about \$435 million. Centralized screening of all reportable excess and selected long supply stocks, and of idle industrial production equipment, has been assigned to the Defense Supply Agency so that all inventory deficiencies and new procurement requirements can be checked against a central record, and idle assets promptly utilized.

c. Eliminating "Goldplating" of Technical Specifications

Each of the Military Departments, the Defense Supply Agency and many defense contractors have established formal "value engineering" programs. These programs are directed to the elimination from technical specifications of specific requirements for materials, fabricating processes and quality standards which are not necessary for the proper functioning of the item.

For example, the Army uses annually hundreds of thousands of practice targets in the training of its troops. The cost of one item, known as the "kneeling target," was cut by 88 percent through the substitution of paste-board for plastic. As a result, the cost of the last annual purchase of this item was reduced by \$700,000. Wherever possible, our objective is to make such revisions in the specifications of new items during the design stage so as to prevent at the outset the payment of price premiums.

During the first quarter of fiscal year 1963, the value engineering improvements reported by the Services will avoid incurring new costs estimated at \$17 million. By the end of fiscal year 1963, we expect to save over \$64 million annually by these efforts. Our goal by end fiscal year 1965 is \$100 million annually.

2. Buying at the Lowest Sound Price

Having assured ourselves that we are procuring only what we need, both quantitatively and qualitatively, our next objective is to minimize the cost of procuring these items.

a. Shifting From Non-Competitive to Competitive Procurement

Failure to use competition more extensively in Defense procurement in the past has not only resulted in higher prices, but has also deprived us of the benefits of a broader industrial base among suppliers, both large and small. With the exception of commercial, off-the-shelf items, competitive buying is quite difficult; nevertheless, there are a number of ways to obtain more competition and we intend to exploit them fully.

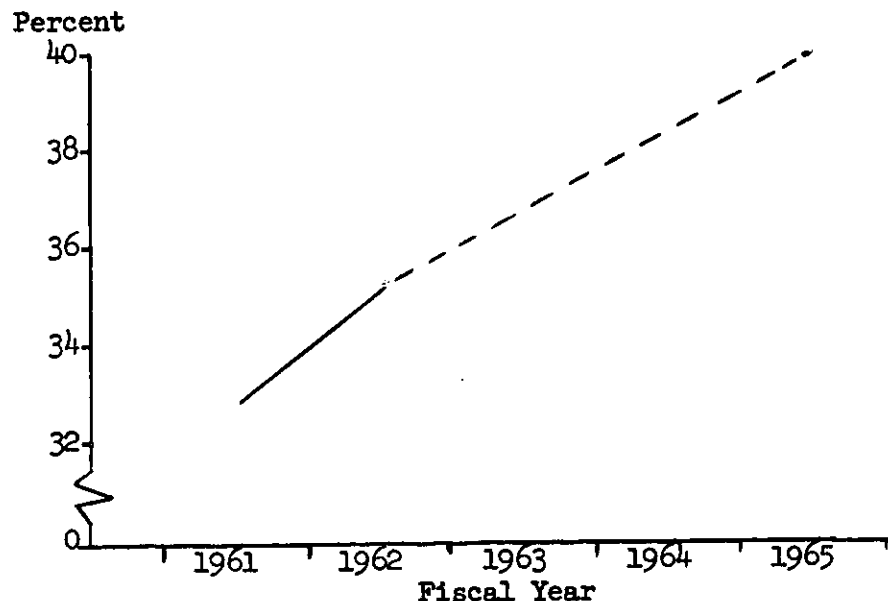
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One method is "breaking-out" high value and high usage spare parts and components for separate procurement instead of buying them automatically from the prime contractor of the end item. "Break-out" requires detailed advance planning to ensure that adequate technical and engineering data are available and to provide sufficient leadtime to search out qualified suppliers before new procurement is required. During the past year, our efforts have been concentrated on spare parts. As the first step, we selected three major purchasing offices buying aeronautical spare parts, and established separate staffs to identify the aircraft spares on which repetitive high value procurement was most likely. Preparations were then made, well in advance of the re-order date, to procure these parts competitively. This procedure worked well and enabled those three offices to increase the dollar-amount of these items bought competitively in fiscal year 1962 by 78 percent. We are now extending this system to other categories of spares.

In still another approach to this problem we are seeking to obtain competitive bids on more new items at the time they pass from development into production or, failing that, as early in the production phase as possible. In this fashion, we hope to avoid the payment of the price premium on the first large-scale production buy usually associated with sole-source procurement.

We have now established specific goals for each Military Department and DSA, expressed in terms of the percentage of procurement contracts awarded competitively in each commodity category.

PRICE COMPETITION AS A PERCENT  
OF TOTAL DEFENSE PROCUREMENT



In fiscal year 1961 the over-all percentage was 32.9 percent and, in fiscal year 1962, 35.6 percent. Our goal by fiscal year 1965 is to reach 39.9 percent, which will require the shifting of about \$1.9 billion from sole-source to competitive procurement.

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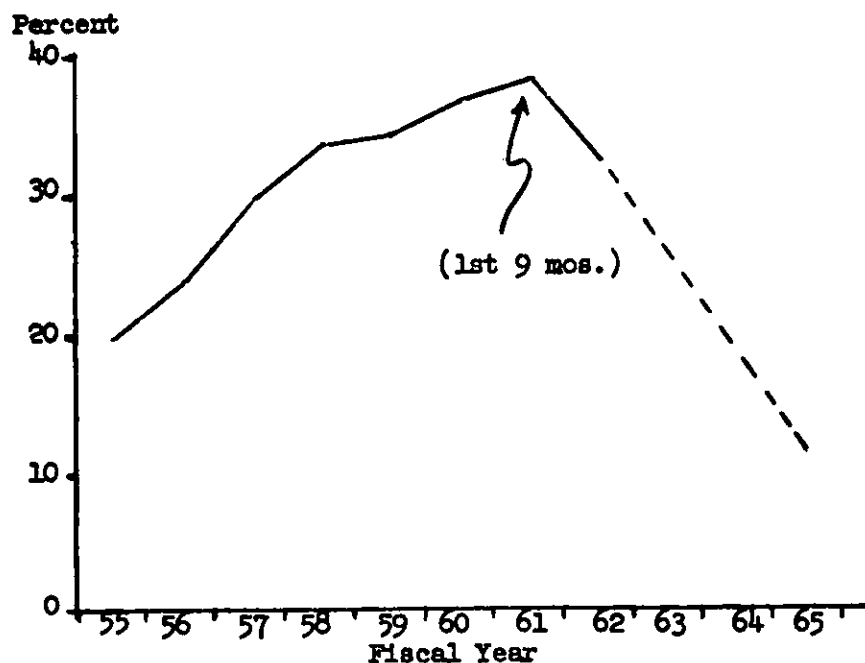
Based on our experience to date and the studies of the General Accounting Office, we anticipate initial price reductions on the order of 25 percent upon transferring items to competitive procurement. We estimate that our progress to date in shifting to competitive procurement has saved \$190 million per year. By end fiscal year 1963, the annual rate of savings should reach \$289 million and if we can achieve the increase in competition targeted for end fiscal year 1965, there would be an annual saving of \$494 million. Detailed records will be kept on our major purchases so that we can report to the Congress the actual savings achieved by shifting from non-competitive to competitive procurement.

b. Shifting From Cost-Plus-Fixed Fee (CPFF) to Fixed Price and Incentive Contracts

Because CPFF contracts do not distinguish between good and bad planning, early or late completion, and tight or loose financial controls, they lead to the kinds of cost overruns which have resulted in some programs costing between three and ten times the amount originally estimated and budgeted. This situation has often led to decisions to produce and deploy weapon systems where a contrary decision might have been made if the true costs had been known. Hence, we believe that, to the extent we are able to increase the use of fixed price and incentive contracts at the expense of the CPFF type, we will not only obtain a better product at a lower cost, but we will also be able to make sounder decisions on the selection of major weapon systems.

We have already achieved some success in moving away from the cost-plus-fixed-fee contract.

COST-PLUS-FIXED FEE AS A PERCENT  
OF TOTAL DEFENSE PRIME CONTRACTS



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Although the proportion of such contracts rose steadily during the last decade, reaching a peak of 38.0 percent of total prime contract awards during the first nine months of fiscal year 1961, this trend was arrested in the last quarter of 1961, and, in fiscal year 1962, was reduced to 32.5 percent. Our goal, a tough one, is to reduce such awards to 12.3 percent of total procurement by fiscal year 1965. Its achievement will require shifting about \$6 billion of procurement from CPFF to the preferred contract types.

We have now developed detailed targets for each military department and Defense agency by commodity category, and a reporting system is now in effect which enables us to measure progress toward these goals on a monthly basis. While only a rough estimate can be made of the benefits of shifting from CPFF to fixed price or incentive contracts, we believe that such action reduces final costs by at least 10 percent. We believe our progress to date has saved \$115 million. Our goal is to raise this annual saving to about \$639 million through actions to be initiated by end fiscal year 1965.

### 3. Reducing Operating Costs

Over one million military and civilian personnel are involved in the operation of procurement offices, inventory control points, warehouses, maintenance activities, and transportation and communication services. Hence, this is an area which lends itself to achievement of substantial savings.

#### a. Terminating Unnecessary Operations - By Closing or Reducing Unneeded Bases and Installations

As I have described to this Committee on previous occasions, the need to review continuously our real property holdings against present and future requirements caused us to establish a permanent base utilization program. Early in calendar year 1961, we began evaluating all installation requirements on both functional and geographic bases, and these reviews are now being made annually.

To date, we have announced plans to close or reduce in scope 313 activities, of which 71 are located overseas and 242 in the U.S. These actions, when completed, will release nearly 264,000 acres of land for non-Defense use. The original acquisition cost of the land and the improvements was \$1.9 billion. Three important benefits result from these actions:

- (i) There is a reduction in annual operation and maintenance costs. Savings reflected in the fiscal year 1964 budget for actions already announced are \$106 million.
- (ii) Military personnel are released for other tasks. Through fiscal year 1964, over 11,000 military personnel will have been released for other essential assignments by base closure or reduction actions already announced. The military pay and allowance costs

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of these personnel are estimated at \$57 million. Thousands of additional military personnel will be released by similar actions for assignment to other tasks during the next three years.

- (iii) The facilities released are turned to productive uses. The Treasury benefits directly from the proceeds of sale. When private interests acquire the property, a tax revenue benefit accrues to local communities and states. When other Government agencies claim and use the property, it becomes unnecessary for them to request funds for new property acquisitions.

Actions anticipated through the end of fiscal year 1963 should produce an annual saving of \$292 million when completed. Our goal is to initiate actions by end fiscal year 1965 which will increase the annual rate of savings to \$442 million.

b. Standardizing and Simplifying Paperwork and Procedures

We are in the process of taking several steps to expedite the massive paperwork operations associated with Defense procurement and supply activities. These actions fall into three main categories: standardization of requisitioning procedures; standardization of transportation and movement procedures; and reduction or simplification of reports required of defense contractors.

With respect to standardized requisitioning procedures, prior to July 1962, sixteen different forms and systems were used to requisition supplies from Defense depots, whenever one Service bought from another or from DSA or GSA. On July 1, 1962, a uniform system was adopted by all Services, DSA and GSA. Important benefits in faster supply actions have resulted - benefits which were particularly important during the Cuban emergency. Moreover, when this new system - known as MILSTRIP (Military Standard Requisitioning and Issue Procedures) - becomes fully operational, it is expected that clerical costs will be reduced by \$20 million annually by end 1965.

With respect to standardized transportation and movement procedures, a new procedure due to become operational July 1, 1963 will cancel 81 transportation documents now in use, and substitute a standard documentation system for all Services. This system will eliminate four rewritings of shipping forms which now occur on each of the 450,000 shipments made each month to overseas users. Furthermore, this system - known as MILSTAMP (Military Standard Movement Procedures) - will expedite the movement of materiel, and cut related administrative and clerical costs by more than \$30 million annually by end 1965.

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Finally, with respect to reducing the reporting burden on Defense contractors, we have undertaken a review of the administrative and technical report requirements, which now cost an estimated \$300 million per year. This review is aimed at simplifying and reducing these reporting requirements in collaboration with our contractors. By end fiscal year 1965, our goal is to achieve cost reductions from this source of approximately \$25 million.

c. Consolidating and Increasing Efficiency of Operations

(1) The Defense Supply Agency: The creation of the Defense Supply Agency (DSA), on October 1, 1961, made possible significant economies in operating costs, as well as relieving the military departments of the burden of conducting procurement and supply activities, permitting the military departments to concentrate management attention on major systems directly related to their primary missions. Savings in personnel costs resulting from the consolidation of formerly separate overhead organizations have produced a reduction in the fiscal year 1964 budget request of \$33 million. We also anticipate a drawdown in DSA's inventories of \$232 million during this fiscal year, as stocks are consolidated and brought under central management. An additional drawdown of \$112 million is projected for 1964.

In the future, additional savings will result from the repositioning of DSA stocks in 11 primary distribution depots instead of the present 32. By end fiscal year 1965 we expect the value of these economies to grow to at least \$42 million annually. I have referred earlier to savings anticipated from DSA's screening of excess and long supply inventories and idle industrial production equipment.

(2) Communications system costs: The increasing dependence of modern military operations, including their command and control, on sophisticated, complex and expensive communications systems makes it imperative, from the viewpoints of both military effectiveness and cost, that we exercise the greatest prudence over our resources in this area. The increased management responsibility assigned to the Defense Communications Agency is directed at this objective.

We have prepared a plan and issued instructions for developing a single long-lines communication system for the use of the entire Department of Defense. This plan calls for cross-connecting all long-lines communications facilities, and this has now been accomplished. We have also consolidated all long-lines networks in continental United States, and intend to consolidate all overseas facilities by the end of this calendar year. Over the next five years, we hope to change over completely to maximum automatic switching, and equipment for this purpose is now being developed. Finally, in order to ensure that we obtain the lowest rates for our leased private line communications facilities, we have also assigned to the Defense Communications Agency responsibility for managing, leasing and paying for all such facilities within and emanating from the continental United States.

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By end fiscal year 1963 savings from these management improvements should reach \$16 million per year, increasing to \$25 million per year by the end of 1965. The fiscal year 1964 budget has been reduced by \$18 million.

(3) Reductions in transportation and traffic management costs: Several specific actions have been taken to lower transportation costs. We have continued to apply vigorously a policy of moving Defense cargo over routes which assure lowest landed cost. Intensive cost analyses of alternative methods of shipping household goods to and from overseas destinations have resulted in important rate reductions. Increased use of economy class passenger travel and lower international air travel rates have also permitted new economies.

As a result of these actions, annual savings of \$17 million should be realized by end 1963 and savings of \$23 million are reflected in the 1964 budget.

(4) Improved equipment maintenance management: Another area where increased management effort yields greater combat readiness and effectiveness as well as monetary savings is that of equipment maintenance - a function which annually costs about \$11 billion. Over the past two years, the Air Force has reviewed the prescribed maintenance requirements for most of its mission-essential aircraft, and has made a good start in determining the maintenance needs of the rest of its aircraft fleet. As a result, 4,400 man-years of maintenance work have been eliminated from the stated requirement. More important, by reducing the number of aircraft in maintenance status at any one time, 45 more B-52's and 31 KC-135's have been made available for operational use.

Both the Army and the Navy have undertaken similar programs of maintenance management improvement in their depots, shipyards, and overhaul and repair facilities. At present, special attention is being given by all Services to establishing uniform maintenance standards for commercial type vehicles, of which we now have over 167,000 in use. Finally, to ensure top level attention in this area and to coordinate efforts of the entire Department, a full-time Deputy Assistant Secretary of Defense for Equipment Maintenance has recently been appointed.

As a result of all of these actions in the field of equipment maintenance, we should be saving about \$108 million per year by end 1963 and over \$300 million per year by end 1965.

(5) Administrative vehicles: Annual savings of about \$3 million by end 1963 are expected to be achieved in the management of administrative vehicles, rising to \$11 million by end 1965.



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(6) Improvement in military family housing management: I discussed improvements in the management of military family housing in the General Support section. Our savings goal for end 1963, from this source, is \$6 million, rising to \$19 million by end 1965 when the full impact of our effort will be felt.

(7) Real property management program: Despite increases of 30 percent in real property holdings and over 11 percent in labor and materials costs since 1959, total maintenance and operating costs for Defense real property have remained relatively level. There is clearly a need for further improvement in our real property management, however, if we are to restrain future cost rises in the face of continued growth in real property and family housing inventories, and if we are to reduce the existing backlog of essential maintenance and repair.

To this end, we are improving our real property management by instituting uniform cost accounting systems and undertaking studies with the help of the military departments, and outside experts in design and construction practices. We are undertaking studies of the operation of heating and power plants, the purchase of utilities, and the development of improved maintenance standards. Savings of \$24 million per year are expected by end 1963, rising to \$45 million per year by end fiscal year 1965.

In summary, our cost reduction program is now in full operation and we hope to be reporting the achievement of substantial economies to you in the months ahead.

### C. IMPROVING OUR PERSONNEL MANAGEMENT

#### 1. Over-all Staffing Levels

For some months, now, we have been conducting two related studies designed to reduce staffing at all organizational levels and to expedite the decision-making process. These studies are designed to identify excessive layers of administrative review and reporting, overlapping functions, and unnecessary or low-priority activities. Surplus positions are being identified and eliminated or transferred to higher priority activities.

The first study, aimed at reducing both military and civilian staffing levels in the headquarters of the military departments, is nearly complete. Progress reports have been very encouraging.

The second study is aimed specifically at a reduction in the number of echelons between the headquarters of the military departments and the operational forces. This study, too, includes an examination of both military and civilian staffing levels. It should be completed early in the Spring.

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Improvement in the efficient utilization of manpower resources is a continuing task. While the present studies reflect a period of concentrated emphasis, our efforts in this direction shall not end with their completion. We shall be continually concerned with making optimum use of our most precious commodity - experienced and dedicated personnel.

## 2. Military Personnel

### a. Extension of the Selective Service Act

We plan to send to the Congress as early as possible during this session a number of important legislative proposals dealing with military personnel, including a major increase in compensation. All of these proposals are based on the assumption that the military draft law will be continued. Our present authority to induct under the Universal Military Training and Service Act of 1951 will expire on July 1, 1963. It is the President's intention to request a four-year extension of that authority. Before recommending this extension, we carefully reviewed the principal alternatives and have concluded that continuation of the draft authority is essential to the proper manning of our armed forces.

We are also requesting a four-year extension of a number of other laws which expire on July 1, 1963, i.e., the authority for the issuance of selective calls for medical personnel and the continuance of special pay for such personnel; the continued suspension of statutory limitations on the active duty strengths of the armed forces; and the extension of the Dependents Assistance Act.

### b. Military Personnel Compensation

Although we plan to present our detailed proposals for changes in military compensation in a later hearing, at this time I would like to give you the background and philosophy upon which they are based, together with a summary of our major recommendations.

Although the essential function of the military pay system is to attract and retain sufficient numbers of qualified personnel to keep our military forces at required levels of effectiveness, our recommendations have also been influenced by considerations of fairness and equity to the military man and his family.

Our review of the compensation system itself was preceded by a detailed analysis of the current and prospective manning situation based upon our present long-range plans. With this information in hand, we considered alternative compensation systems, including a change to a "salary" concept, to see if our manpower requirements and equity to our military personnel could be better served by a new type of system. In

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addition, each element of compensation, i.e., basic pay, re-enlistment bonuses, subsistence allowances, etc., was separately examined to determine whether it was still serving a useful purpose.

This review led to three principal conclusions:

- (1) There should be an immediate adjustment in military pay scales and in certain allowances to bring them into better balance with Government civilian pay scales and those in private industry, to reflect rises in the cost of living since the last pay adjustment, to increase the attractiveness of military service as a career, and to correct certain inequities in the present structure.
- (2) The basic structure of the present compensation system, with the exception of certain reforms which I shall mention, should not be changed at this time.
- (3) In the future, military compensation rates should be the subject of annual review, and changes should be made contemporaneously with those in other statutory Government pay systems and should be based on essentially the same considerations.

With respect to the second conclusion, two major changes and several minor ones are being proposed. The first major change would repeal the present pay for overseas or shipboard duty and substitute a special pay for duty at remote and isolated stations. The second major change would abolish the present system of re-enlistment bonuses and substitute a system of incentive payments to deal with the problem of the selective retention of enlisted personnel.

With respect to the first conclusion, the adjustment of present rates, we are proposing an average increase in base pay of 14.4 percent, which together with the increase in the BAQ approved last year and the proposed increase in subsistence allowances, would raise pay and allowances, on the average, about 13.9 percent. Admittedly, this is a large increase, but it is now almost five years since the last adjustment in military pay scales, and there have been two increases in civilian pay in that time.

The largest percentage increases in the officer category would go to 1st lieutenants and captains, and in the enlisted category to the E-3's and E-4's. These grade levels are the critical decision points in the career ladder. Officers completing their first tour are normally 1st lieutenants and enlisted men completing their first enlistments are usually at the E-3 or E-4 level. It is in these categories that the largest losses of desirable personnel are experienced. To retain these men beyond these critical points, rates of compensation for their present

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and next prospective grades must be made more competitive with those offered in civilian life.

The increases for grades E-7 (beyond 20 years), E-8 and E-9 are designed to improve the attractiveness of Service beyond the minimum retirement period of 20 years.

With respect to the third conclusion, I believe that military compensation should be kept abreast of productivity changes in our national economy, as are wages and salaries in the civilian sector. Accordingly, I have directed the Assistant Secretary of Defense (Manpower) to establish the necessary administrative procedures to conduct an annual review of military compensation in relation to changes in the civilian economy.

Some of the most vexing problems of the military compensation system are those concerning retirement pay. We chose, in our current study, to concentrate on what appear to be the two most pressing problems in this area: (1) the establishment of an equitable basis for the computation of retired pay of military personnel who may retire in the future; and (2) the adjustment of the pay of those already on the retired rolls.

The cost of retirement pay has been mounting rapidly in recent years and will continue to rise for many years in the future. In 1954, for example, there were less than 6 military retirees for each 100 men on active duty. Today the ratio of retirees to active duty personnel has risen to 12 percent and assuming no major change in the size of the active forces, the ratio will rise to 25 percent by 1970.

Historically, adjustment of retirement pay has been linked to changes in basic pay rates of the active forces. But pay of the active forces should be related to pay rates in the civilian economy and elsewhere in the Government if the armed forces are to compete effectively for desirable personnel. Pay of retirees, on the other hand, should be related to the cost of living so that retired personnel or their dependents are not penalized by changes in price levels.

Accordingly, as an alternative to recomputation based on a direct linkage to active duty pay, I recommend that future readjustments in military retirement pay be tied to changes in the Consumer Price Index. Such a system would maintain the primary objective of stabilizing and maintaining the purchasing power of the annuity while at the same time give us the maximum flexibility in managing the active forces. Adoption of this proposal -- which would require a five percent increase immediately for all retired personnel -- would add about \$50 million to retirement pay costs in fiscal year 1964.

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The first full year cost of the proposed military pay bill, including the increase in quarters allowance and the increase in the liability for retired pay, is estimated at \$1.7 billion. On the assumption that Congress will act favorably on this proposal in time for it to become effective by October 1, 1963, the fiscal year 1964 budget cost is estimated at about \$1,185 million, including \$285 million for the increased quarters allowance and \$90 million for the proposed increase in the subsistence allowance.

Regardless of what we do on the matter of future adjustments, there remains the problem of what to do about those military personnel who retired prior to June 1, 1958 and who did not receive the benefit of the 1958 pay increase. One hundred years of precedent and the absence of any "notice" had led military retirees to believe that their retirement pay would continue to be based on active duty rates and that no disadvantage would accrue from early retirement. Indeed, many who could have postponed their retirement until after the 1958 pay raise was enacted, left the Service in the full expectation that their retirement pay would also be adjusted to the new pay scales. Therefore, we recommend that the retirement compensation of these individuals be recomputed on the basis of the current pay scales, at a cost of about \$33 million in fiscal year 1964 and an ultimate total cost approximating \$600 million. Henceforth, however, all adjustments in military retirement pay would be based upon changes in the Consumer Price Index.

c. Review of the Officer Personnel Legislation

For many years the pay scales prescribed by Congress for officers of the Armed Services have been uniform and based on military grade and length of service. However, while the scales have been uniform, the laws which govern the appointment or promotion of officers to the various grades and stipulate tenure are entirely separate and different in application among the various services.

The officer personnel legislation to be submitted to this Congress would provide common legislative direction to the Army, Navy, Air Force, and Marine Corps in procurement, promotion, separation and retirement of active duty officers. It has been developed from the studies of a committee of distinguished retired officers of all of the Services, chaired by General Charles L. Bolte, and from subsequent intensive reviews in the Executive Branch. It is, in total effect, a new system, rather than a reconciliation of differences.

The proposed legislation has avoided drastic, immediate impact on individual officers and has aimed at long term comparability of officers' careers in the various services. However, this approach has involved solution of an immediate and chronic problem in connection with Air Force

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field grade authorizations, with which the Congress has dealt previously on an interim basis. A moderate increase in numbers of officers in these grades in that service results from the legislation.

d. Other Personnel Legislation

There are three further items of proposed personnel legislation which should be mentioned here. In order to extend proper recognition to military personnel for acts of heroism and gallantry in "cold war" situations, we propose that the authority and criteria for awarding the Congressional Medal of Honor and other military decorations be expanded. The current criteria for these awards were established to fit conditions of warfare as they existed some years ago and should now be changed to accord with the needs of the military in the new forms of conflict.

Legislation is also proposed to amend Title 10, U.S.C., relating to the method of nominating and selecting candidates for appointment to the Military, Naval and Air Force Academies. This proposed amendment would revise the present system for appointment to the Academies to provide more equitable opportunities for those persons desiring to enter these schools. The proposed changes would also authorize the same basic strength for each Academy - a strength large enough to enable the Services to approach more closely their goal of having at least 50 percent of the regular officer input composed of Academy graduates.

Finally, we also plan to recommend legislation which would provide comparable subsistence standards among the military services by establishing a single, uniform ration. Presently the subsistence allowances of the Army and Air Force, as established by statute, differ in certain respects from those of the Navy and Marine Corps.

e. Active Duty Military Personnel

The proposed fiscal year 1964 program and budget provides for active duty military personnel as follows:

	End Fiscal Year		
	1962	1963	1964
	<u>Actual</u>	<u>Est.</u>	<u>Planned</u>
Army	1,065,718	980,000	975,000
Navy	665,977	664,413	670,000
Marine Corps	190,962	190,000	190,000
Air Force	<u>883,330</u>	<u>868,931</u>	<u>860,000</u>
Total DOD	2,805,987	2,703,344	2,695,000

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## XI. FINANCIAL SUMMARY

The programs proposed for fiscal year 1964, including Military Assistance, Military Construction and Civil Defense, aggregate \$55,183,537,000 in total obligational authority. A summary by major programs for fiscal years 1962, 1963 and 1964 is shown in Table 1.

Of the \$55,183,537,000 in obligational authority required to finance the 1964 program:

\$947,686,000 would be obtained from prior year funds available for new programs, including balances brought forward and recoupments anticipated during the year.

\$300,000,000 would be obtained by transfer from the working capital funds of the Department of Defense in lieu of new appropriations, and

\$275,214,000 would be obtained from anticipated reimbursements which would be available to finance new programs, leaving

\$53,660,637,000 of new obligational authority which is the amount requested in the President's fiscal year 1964 budget. A detailed tabulation relating the appropriation accounts to the major program accounts, and the Total Obligational Authority to the New Obligational Authority requested of the Congress in the 1964 budget, is shown on Table 22. (Comparable data for 1963 are shown on Table 21.)

Of the \$53,660,637,000 of new obligational authority requested, the following amounts will be presented separately:

\$1,480,000,000 for Military Assistance

\$1,232,000,000 for Military Construction

\$734,400,000 for Military Family Housing

\$300,000,000 for Civil Defense, and

\$900,000,000 for Military Compensation.

Provision for two items of proposed legislation - Uniform Career Management (\$5,300,000) and Uniform Ration (\$1,200,000) - is made within the Government-wide "Allowances for Contingencies."

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Thus, the bill now before this Committee would provide \$49,014,237,000 in new obligational authority and \$300,000,000 to be derived by transfer from working capital funds.

In addition, we are requesting a fiscal year 1963 Supplemental Appropriation totaling \$394,694,000. We have carefully reviewed all of the additional costs arising from new legislation enacted by the Congress last year and we will absorb as much of them as possible using available funds. Of the \$394,694,000:

\$113,300,000 is to defray the costs of Army reserve component personnel retained in the active forces beyond the end of fiscal year 1962, as authorized by Section 512c of the 1963 Appropriation Act. This provision permits the Secretary of Defense, upon determination by the President that it is necessary to increase the number of military personnel on active duty beyond the number for which funds are provided, to treat the cost of such an increase as an excepted expense.

\$83,800,000 is to pay that part of the cost of the increase in the basic allowance for quarters, enacted by the Congress last year, which cannot be absorbed within available funds (the full cost for 1963 is estimated at \$132,100,000).

\$5,200,000 is to defray the cost of increased readjustment pay enacted by the Congress last year for certain members of the reserve components involuntarily released from active duty. (The full 1963 cost is estimated at \$7,400,000.)

\$17,369,000 is to pay the unabsorbable cost of increased military per diem allowances authorized by the Congress last year. (The full 1963 cost is estimated at \$21,200,000.)

\$61,900,000 is for Civil Defense to equip and stock additional shelter spaces.

\$113,125,000 is to meet the unabsorbable cost of the civilian pay increase enacted last year. (The full 1963 cost is estimated at \$153,900,000.)

We shall probably also have to use the authority contained in Section 537 of the 1963 Appropriation Act to defray certain costs incurred in connection with the Cuban crisis. This is the provision which authorizes the Secretary of Defense to transfer up to an additional \$200,000,000 from any appropriation of the DoD to improve further the readiness of Armed Forces, including the reserve components.

Both Sections 512c and 537 have proven to be extremely useful to the Defense establishment in responding quickly to sudden changes in the international situation. New surprises are undoubtedly in store for us in the coming fiscal year and we strongly urge the Congress to continue these provisions in the 1964 Appropriation Act.

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TABLE 1 - FINANCIAL SUMMARY  
(In Billions of Dollars)

	FY 1961 Actual	FY 1962 Original	FY 1962 Final	FY 1963 Current Estimates	FY 1964 Budget Estimates
1. Strategic Retaliatory Forces	\$	\$ 7.6	\$ 9.1	\$ 8.5	\$ 7.3
2. Continental Air and Missile Defense Frcs.		2.2	2.1	1.9	2.0
3. General Purpose Forces		14.5	17.5	18.1	19.1
4. Airlift/Sealift Forces		.9	1.2	1.4	1.4
5. Reserve and Guard Frcs.		1.7	1.8	2.0	2.0
6. Research & Development		3.9	4.3	5.5	5.9
7. General Support		12.3	12.7	13.7	14.6
8. Civil Defense			.3	.2	.3
9. Military Assistance		1.8	1.8	1.6	1.6
Proposed Legislation for Military Compensation, etc.					.9a/
Total Obligational Authority	\$46.1	\$44.9	\$51.0	\$52.8	\$55.2
Less Financing Adj.	3.0	1.2	1.6	1.5	1.5
New Obligational Auth.	\$43.1	\$43.7	\$49.4	\$51.3	\$53.7
Adj. to Expenditures	+1.6	+1.0	-1.2	-1.3	-1.3
Total Expenditures	\$44.7	\$44.7	\$48.2	\$50.0	\$52.4
TOA by Dept. & Agency					
Army	\$10.5	\$10.6	\$12.8	\$12.2	\$13.1
Navy	12.8	12.5	14.9	15.2	15.5
Air Force	20.1	18.7	20.0	20.9	20.7
Civil Defense			.3	.2	.3
Defense Agencies	.3	.4	.3	1.8	1.9
Retired Pay	.8	.9	.9	1.0	1.2b/
Military Assistance	1.5	1.8	1.8	1.6	1.6
Proposed Legislation					.9a/
Totalc/	\$46.1	\$44.9	\$51.0	\$52.8	\$55.2
Memo: Recently enacted & proposed increases in compensation included above:					
Military				\$.1	\$1.2
Civilian				.2	.3
Total				\$.3	\$1.5

a/ The first full year expenditure for the items covered by the new legislation is estimated at \$1,200 million. This figure excludes the \$285 million annual increase for basic allowance for quarters which became effective Jan 1, 1963. It also excludes an increase of \$230 million per year in the Government's "unfunded" cost of military retirement resulting from the increases in active duty pay. Therefore the total average annual cost of all the pay increases, proposed to be effective in the calendar year 1963, is approximately \$1,715 million.

b/ In addition to this budgeted expenditure, the Government's "unfunded" cost of military retirement for "current" Service, i.e. Service performed in FY '64, is approximately \$600 million on the basis of existing pay rates and \$830 million on the basis of proposed pay rates. The total "unfunded past Service cost" of the military retirement program will amount to approximately \$49.9 billion at July 1, 1963 on the basis of existing pay rates and \$55.2 billion on the basis of the proposed rates.

c/ Excludes cost of nuclear warheads.

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TABLE 2 - STRATEGIC RETALIATORY FORCES<sup>e</sup>

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TABLE 3 - CONTINENTAL AIR AND MISSILE DEFENSE FORCES

	End Fiscal Year							
	1961	1962	1963	1964	1965	1966	1967	1968
<u>Surveillance, Warning &amp; Control</u> <sup>c/</sup>								
NORAD Combat Opns Ctr	1	1	1	1	1	1	1	1
SAGE Combat Ctrs	3	3	3	3	3	3	3	3
SAGE Dir Ctrs (CONUS)	20	22	22	16	16	16	16	16
SAGE Combat Dir Ctr (CADIN)				1	1	1	1	1
Prime Radar Stations	167	160	163	148	148	148	148	148
BUIC Cont Ctrs (Manned)		4	27	27	27	7	7	7
BUIC Cont Ctrs (Semi-auto)					16	34	34	34
Gap Filler Radars	112	103	111	169	173	173	173	173
DEW System Stations	63	67	67	67	67	67	67	67
DEW System Extension								
Aircraft	43	43	43	45	45	45	45	45
Ships (DER)	5	5						
Offshore Contiq. Radar								
AEW&C Aircraft	60	60	67	67	67	67	67	67
Ships (AGR)	16	16	16	16	16	16	16	16
Ships (DER)	5	6	6	6	6	6	6	6
HERCULES Control Centers								
Missile Master	10	10	10	10	6	3		
Birdie		18	18	18	22	28	28	28
<u>Manned Interceptors</u> <sup>b/</sup>								
Air Force								
F-101	384	312	312	312	306	300	294	294
F-102	393	293	287	267	267	255	248	241
F-106	270	276	264	252	246	234	222	216
Navy								
F4D	25	25						
Air National Guard								
F-86	250	200	150	150	100	100	100	100
F-89	250	250	225	225	225	225	225	225
F-100	75	75	75	75	75	75	75	75
F-102	175	175	175	175	175	175	175	175
F-104	75		50	50	50	50	50	50
<u>Surface-to-Air Missiles</u>								
BOMARC <sup>c/</sup>	238	307	383	383	383	383	383	383
NIKE-HERCULES (Reg) <sup>d/</sup>	2340	2340	2052	1692	1476	1476	1476	1476
NIKE-HERCULES (ANG) <sup>d/</sup>	108	108	396	756	972	972	972	972
NIKE-AJAX (ANG) <sup>d/</sup>	1520	1440	720					
<u>Warning (Missile Attack)</u>								
BMEWS Sites	2	2	2	3	3	3	3	3

a/ Includes CONUS, Alaska, Greenland, Iceland and Canada including CADIN (Continental Air Defense Integration) unless otherwise noted.

b/ Numbers of aircraft are obtained by multiplying authorized squadron Unit Equipment by number of squadrons.

c/ BOMARC figures reflect missiles on launchers.

d/ NIKE-HERCULES and AJAX reflect number of missiles authorized.

TABLE 4 - GENERAL PURPOSE FORCES - ARMY

	End Fiscal Year							
	1961	1962	1963	1964	1965	1966	1967	1968
<u>Divisions</u>								
Airborne	2	2	2	2	2	2	2	2
Armored	3	3	3	3	3	3	3	3
Infantry	9	9	9	6	6	6	6	6
Mechanized		2	2	5	5	5	5	5
TOTAL	14	16 <sup>a/</sup>	16	16 <sup>c/</sup>	16 <sup>c/</sup>	16	16	16
Combat Ready	11	14 <sup>a/</sup>	16	16	16	16	16	16
Training	3	2						
<u>Brigades</u>	2	1	5	8	8	8	8	8
<u>Armored Cav Regiments</u>	5	5	4	4	4	4	4	4
<u>Infantry Battle Groups</u>	8	9	8					
<u>Missile Commands</u>	4	3	2	2	2	2	2	2
<u>Spec Forces</u>	3	4	6	6	6	6	6	6
<u>Air Defense Battalions</u>								
HERCULES	12-3/4	13-3/4	13-3/4	13-3/4	14-3/4	15-3/4	15-3/4	15-3/4
HAWK	13	19	21	21	21	21	21	21
MAULER						1	10	16
TOTAL	25-3/4	32-3/4	34-3/4	34-3/4	35-3/4	37-3/4	46-3/4	52-3/4
<u>Surface-to-Surface Msl. Bns.</u>								
REDSTONE	3	3	3					
CORPORAL	9	8	6					
SERGEANT		3	6	6	6	6	6	6
PERSHING		1	3	5	5	5	5	5
LACROSSE	6	6	6	6	6	6	6	6
HONEST JOHN	7	7	7	6	6	6	6	6
LITTLE JOHN	2	2	3	3	3	3	3	3
TOTAL	27	30	34	26	26	26	26	26
<u>Other Artillery Bns.</u> <sup>b/</sup>	41	41	53	50	48	48	48	48
<u>Other Combat Bns.</u>	32	33	39	30	30	30	30	30
<u>Aviation Companies</u>	34	37	39	27	30	31	31	31

a/ Excludes two National Guard divisions in active status.

b/ Includes target acquisition battalions - 5 in FY 1962; 6 in FY 1963-68.

c/ Plus 15,000 men in units required to test air mobility concepts.

TABLE 5 - ARMY RESERVE COMPONENTS PROGRAM

	Thousands of Men		Percent of TOE Strength		Readiness (Wks) Objectives		Civilian Technicians	
	Before <sup>a/</sup> Realign	After <sup>a/</sup> Realign	Before <sup>a/</sup> Realign	After <sup>a/</sup> Realign	Before <sup>a/</sup> Realign	After <sup>a/</sup> Realign	Before <sup>a/</sup> Realign	After <sup>a/</sup> Realign
On Site Air Defense	9.2	7.2	84	85	0	0	4392	5126
Units to Reinforce Active Army	127.8	139.4	71	80	4-21	4-8	3016	4734
Two Brigades <sup>a/</sup>	10.8	5.7	71	80	16-24	5	406 <sup>a/</sup>	191
Nine Brigades	-	32.1	-	75	-	8	-	1254
Training Base & Units	59.7	73.6	55-100	75-100	2-8	1-4	1030	1482
Six Divs & Their Support	155.3	175.8	65-70	75-80	16-24	4-8	6446	7098
Two Theater Reinforcement Divs & Support <sup>b/</sup>	33.9	26.9	58-65	70	24	4-12	832	1239
Support to Other Svcs	14.0	11.2	65	70	16-24	16-24	416	251
Other Divisions )	289.7	226.9	55	53-60	24-36	24-36)	9046	5250
Non Division units)			55	55	36	24-36)		1632
Eight Opl Hqs	-	1.2	-	100	-	0	0	42
Priority Fillers <sup>c/</sup>	32.0	64.						
TOTAL	700,000 <sup>e/</sup> / 700,000						25,584 <sup>f/</sup>	28,289 <sup>f/</sup>

a. Three brigades in structure at present.

b. To be deployed in Alaska and Panama at M + 2 months and complete training in the theater. Panama Division does not have combat support.

c. Personnel attending 2 weeks summer camp not included in paid drill strength.

d. Before realignment is shown as FY 62 strength and organization. After realignment is shown as FY 64 strength and organization.

e. The figure of 700,000 was the programmed paid drill strength for FY 1962. 621,800 was the actual drill strength due to two division forces being on active duty.

f. Denotes end-year strength.

TABLE 6 - ARMY PROCUREMENT  
(Total Obligational Authority in Millions)

	Fiscal Years							
	1961		1962		1963		1964	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
<u>AIRCRAFT</u>								
UH-1B/D IROQUOIS	118	43.2	323	117.0	360	112.8	710	235.7
CH-47A CHINOOK	18	43.6	24	41.9	24	45.7	60	132.8
OH-13/23	150	7.3	76	5.0	150	6.7	360	19.8
OA-1 MOHAWK	54	50.9	58	51.8	-	-	50	46.8
CV-2 CARIBOU	34	25.5	53	39.0	48	37.4	48	38.0
Training Helicopters	-	-	-	-	-	-	310	8.4
Aircraft Ins. Trainer	-	-	-	-	-	-	60	3.4
Replenish. Spares	-	-	-	-	-	19.4	-	33.8
All Other Items	-	10.3	-	9.1	-	4.9	-	3.4
Total	374	\$180.8	534	\$263.8	582	\$226.9	1,598	\$522.1
<u>MISSILES<sup>a/</sup></u>								
HAWK	1,426	109.2	1,908	141.0	1,200	75.9	1,880	67.5
HERCULES	1,191	138.7	188	92.8	662	120.1	720	97.9
MAULER	-	-	-	-	-	-	164	75.6
REDEYE	-	-	-	-	735	9.8	-	-
LITTLE JOHN	380	12.3	480	9.1	480	4.3	471	7.7
SERGEANT	50	70.0	136	80.5	180	70.1	93	39.7
HONEST JOHN	1,561	35.3	1,156	30.1	209	13.0	600	13.0
PERSHING	2	60.9	43	150.8	120	174.7	153	164.4
ENTAC/SS-11	10,571	11.6	11,000	11.7	23,428	27.4	23,800	45.3
Spare Support	-	-	-	-	-	17.8	-	22.3
All Other	-	19.8	-	5.0	-	16.8	-	47.3
Total	-	\$457.8	-	\$521.0	-	\$529.9	-	\$580.7
<u>WEAPONS AND COMBAT</u>								
<u>VEHICLES</u>								
M-14 Rifle	240,000	32.7	300,000	37.8	375,000	39.3	230,000	25.8
M-60 Mach. Gun	-	-	12,000	5.5	12,000	6.0	12,000	6.0
M-73 Mach. Gun	-	-	710	1.7	3,250	4.2	3,175	4.1
105mm S.P. Howitzer	-	-	355	50.3	199	25.9	178	21.8
155mm S.P. Howitzer	-	-	217	42.1	150	27.8	183	31.4
8" S.P. Howitzer	-	-	107	16.3	150	21.3	89	13.6
Mortar Carrier, S.P.	-	-	215	7.5	625	20.0	732	26.8
105mm Towed Howitzer	-	-	-	-	-	-	400	13.2
DAVY CROCKETT	-	-	-	6.4	-	10.5	-	11.4
M-60 Tank	825	130.0	710	109.3	720	117.2	240	45.6
M-113 Pers. Carrier	1,800	50.5	3,030	77.9	3,000	74.2	2,000	60.1

<sup>a/</sup> Cost data includes ground support equipment.

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TABLE 6 - ARMY PROCUREMENT (cont'd)

	Fiscal Years							
	1961		1962		1963		1964	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
<u>WEAPONS AND COMBAT</u>								
<u>VEHICLES (cont'd.)</u>								
T-114 Recon. Vehicle	-	-	1,215	51.7	1,200	37.3	1,200	37.8
Command Post Vehicle	-	-	270	9.3	650	20.1	630	21.6
All Other Items	-	118.3	-	177.9	-	131.2	-	169.4
Total	-	\$331.5	-	\$593.7	-	\$535.0	-	\$488.6
<u>TACTICAL &amp; SUPPORT</u>								
<u>VEHICLES</u>								
Truck, 1/4-ton	7,524	30.2	14,625	54.2	12,000	39.7	10,000	34.7
Truck, 3/4-ton	7,100	30.2	4,750	20.2	10,000	43.1	8,000	34.5
Truck, 2-1/2-ton	6,033	48.8	6,364	51.3	10,000	87.7	8,000	69.7
Truck, 5-ton	2,250	27.1	6,899	81.1	4,730	64.7	4,234	54.4
Truck, Tractor, 10-ton	-	-	-	-	-	-	500	14.6
Semi-Trailer, 12-ton	-	-	1,203	5.7	400	1.9	3,168	15.0
Heavy Equipment Transporter	2	.2	-	.3	280	19.9	200	13.5
All Other Items	-	34.9	-	74.7	-	89.3	-	106.7
Total	-	\$171.4	-	\$287.6	-	\$346.3	-	\$343.1
<u>COMMUNICATIONS &amp; ELECTRONICS</u>								
STARCOM	-	-	-	27.5	-	76.8	-	59.0
Comm. Security Equip.	-	-	-	-	-	29.4	-	25.0
ASA Intell. Equip.	-	-	-	-	-	22.2	-	21.4
AN/PRC-25 Radio	-	-	8,570	18.5	10,800	17.5	10,000	20.2
AN/VRC-12 Radio	3,935	35.7	10,115	67.4	7,544	33.9	5,000	22.4
All Other Items	-	159.7	-	185.9	-	135.8	-	257.9
Total	-	\$195.4	-	\$299.3	-	\$315.6	-	\$405.9
<u>OTHER SUPPORT EQUIPMENT</u>								
	-	63.5	-	141.0	-	216.2	-	243.1
<u>AMMUNITION (Thous.)</u>								
7.62mm Cartridge	253	22.5	11	1.7	519	46.7	879	79.1
105mm HE Cart.	125	16.8	424	59.9	171	21.0	380	38.4
155mm HE Proj.XM-402/T-379	-	-	200	55.5	360	78.4	300	67.5
90mm Cart.(all types)	423	18.7	459	20.8	-	-	952	39.3
All Other Items	-	219.1	-	241.4	-	212.9	-	365.0
Total	-	\$277.1	-	\$379.3	-	\$359.0	-	\$589.3
<u>PRODUCTION BASE PROGRAM</u>								
	-	75.0	-	146.4	-	114.8	-	143.2
<u>TOTAL ARMY PROCUREMENT</u>								
	-	\$1754.1	-	\$2632.1	-	\$2643.7	-	\$3316.0

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TABLE 7 - GENERAL PURPOSE FORCES - NAVY SHIPS

	End Fiscal Year							
	1961	1962 <sup>a/</sup>	1963	1964	1965	1966	1967	1968
I. ACTIVE FORCES								
<u>Attack Carriers</u>								
CVA(New)								1
CVAN(Enterprise)		1	1	1	1	1	1	1
CVA(Forrestal)	5	6	6	6	7	7	7	7
CVA(Midway)	3	3	3	3	3	3	3	3
CVA(Essex)	7	6	5	5	4	4	4	3
Total Attack Carriers	<u>15</u>	<u>16</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>
ASW Support Carriers(CVS)	9	10	9	9	9	9	9	9
<u>Cruisers</u>								
CGN		1	1	1	1	1	1	1
CG/CLG/CAG	8	8	10	11	11	11	11	11
CA(Gun)	4	4	3	2	2	2	2	1
Total Cruisers	<u>12</u>	<u>13</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>13</u>
<u>Frigates</u>								
DLGN			1	1	1	2	2	2
DLG	8	10	13	19	21	28	28	28
DL(Gun)	5	5	5	3	1			
Total Frigates	<u>13</u>	<u>15</u>	<u>19</u>	<u>23</u>	<u>23</u>	<u>30</u>	<u>30</u>	<u>30</u>
<u>Destroyers and Escorts</u>								
DDG	7	13	17	22	23	25	38	45
DD/DDE/DDR	203	212	190	179	180	167	137	117
DEG					1	4	6	6
DE/DER	27	56	33	34	29	32	37	47
Total Destroyer Types	<u>237</u>	<u>281</u>	<u>240</u>	<u>235</u>	<u>233</u>	<u>228</u>	<u>218</u>	<u>215</u>
Small Patrol	4	2	4	4	4	9	15	22
<u>Attack Submarines</u>								
SSN(Nuclear)	13	16	19	25	28	31	41	48
SS(Modernized)	9	9	9	9	11	18	25	31
SS(Unmodernized)	83	79	75	69	65	56	39	26
Total Submarines	<u>105</u>	<u>104</u>	<u>103</u>	<u>103</u>	<u>104</u>	<u>105</u>	<u>105</u>	<u>105</u>
Mine Warfare Vessels	86	87	87	87	88	88	88	88
Amphibious Ships	111	131	133	134	128	120	114	109
Auxiliary Ships	202	213	212	212	207	204	199	194
TOTAL ACTIVE FORCES	<u>794</u>	<u>872</u>	<u>836</u>	<u>836</u>	<u>825</u>	<u>822</u>	<u>807</u>	<u>800</u>
II. RESERVE FORCES								
Destroyer Types	40		40	45	48	48	48	48
Mine Warfare Vessels	11	11	12	12	12	12	12	12
TOTAL RESERVE FORCES	<u>51</u>	<u>11</u>	<u>52</u>	<u>57</u>	<u>60</u>	<u>60</u>	<u>60</u>	<u>60</u>

a/ Includes ships retained for the Berlin build-up.

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**TABLE 8 - GENERAL PURPOSE FORCES - NAVY SHIP CONSTRUCTION AUTHORIZATION PROGRAM**

	Authorized for Start of Construction in Fiscal Year							
	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
<b>New Construction</b>								
CVA - Attack Carrier	1		1		1		1	
CVS - ASW Carrier								1
Frigates	3	7			1	2	3	2
Destroyers	2							
Escorts	3	6	8	10	8	14	15	17
Small Patrol			2	6	6	10		
SSN-ATT Sub(Nuclear)	1	3	8	6	6	6	6	6
Mine Warfare						4	5	7
Amphibious	1	4	5	5	7	10	10	8
Log. Supt Auxiliaries	<u>3</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>8</u>	<u>8</u>	<u>15</u>	<u>13</u>
Total New Construction	<u>14</u>	<u>21</u>	<u>25</u>	<u>30</u>	<u>37</u>	<u>54</u>	<u>55</u>	<u>54</u>
<b>Conversion</b>								
Frigates (DL to DLG)						1		
Destroyers (FRAM I)	14	14	24	19				
Guided Msl Destroyers				7	15			
SS-ATT Submarine		6			7	8	6	6
Amphibious					1	1		
Mine Warfare			1	1				
Log. Supt Auxiliaries	<u>1</u>	<u>—</u>	<u>5</u>	<u>7</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>3</u>
Total Conversions	<u>15</u>	<u>20</u>	<u>30</u>	<u>34</u>	<u>28</u>	<u>14</u>	<u>9</u>	<u>9</u>
Total Const. & Conv.	<u>29</u>	<u>41</u>	<u>55</u>	<u>64</u>	<u>65</u>	<u>68</u>	<u>64</u>	<u>63</u>
Total Cost of Ships (M)	\$896	\$1321	\$1692	\$1617	\$2375	\$2118	\$2547	\$2188
Landing & Service Craft	2	7	10	15	15	15	15	15
Fire Damage, CVA-64		40						
Gross Cost	\$899	\$1368	\$1702	\$1632				
Net Adv Procurement	<u>-5</u>	<u>+17</u>	<u>+34</u>	<u>-3</u>				
TOTAL	<u>\$894</u>	<u>\$1385</u>	<u>\$1736</u>	<u>\$1629</u>				

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TABLE 9 - GENERAL PURPOSE FORCES - NAVY AND MARINE CORPS OPERATING AIRCRAFT  
(Active Forces and Reserves)

	End Fiscal Year							
	1961	1962	1963	1964	1965	1966	1967	1968
<u>Attack Carrier Air Grps.<sup>a/</sup></u>								
Fighter Bombers								
F-111(TFX)								8
F-4B(F4H)		111	159	180	235	276	304	345
F-8(F8U)		246	284	284	220	182	155	90
Other(F-3B/F-6A)		159	66	38				
Total	<u>488</u>	<u>516</u>	<u>509</u>	<u>502</u>	<u>455</u>	<u>458</u>	<u>459</u>	<u>443</u>
Attack								
A-4(A4D)		509	492	492	492	492	492	492
A-6A(A2F-1)			7	32	54	68	95	88
A-1H/J(AD-6/7)		233	220	195	173	161	131	131
AF-1E(FJ-4B)		10						
Total	<u>722</u>	<u>752</u>	<u>719</u>	<u>719</u>	<u>719</u>	<u>721</u>	<u>718</u>	<u>711</u>
Heavy Attack								
A-3A/B(A3D-1/2)		116	125	113	96	104	101	94
A-5A/B(A3J-1/2)	92	17	29	15				
Recon/Countermeas.								
A-5C(A3J-3)				36	78	72	68	66
RF-8A(F8U-1P)		55	60	54	36	28	24	24
RA-3B(A3D-2P)		21	20	19	17	17	15	15
Other		23	22	22	20	20	18	18
Total	<u>89</u>	<u>99</u>	<u>102</u>	<u>131</u>	<u>151</u>	<u>137</u>	<u>125</u>	<u>123</u>
Fleet Air Early Wing								
E-2A(W2F-1)				13	40	64	85	110
Other	124	157	145	132	109	81	60	35
Support Aircraft	<u>201</u>	<u>171</u>	<u>172</u>	<u>167</u>	<u>167</u>	<u>156</u>	<u>154</u>	<u>151</u>
TOTAL CAR. AIR GRPS.	<u>1716</u>	<u>1828</u>	<u>1801</u>	<u>1792</u>	<u>1737</u>	<u>1721</u>	<u>1702</u>	<u>1667</u>
<u>Carrier ASW Air Groups<sup>a/</sup></u>								
S-2(S2F)		241	209	209	209	209	209	209
SH-34(HSS-1/LN)		109	57	30	11			
SH-3A(HSS-2)		61	111	138	157	168	168	168
Station Support Acft		38	37	34	33	31	29	26
A-4(A4D-2N)							27	36
Total Carrier	<u>383</u>	<u>449</u>	<u>414</u>	<u>411</u>	<u>410</u>	<u>408</u>	<u>433</u>	<u>439</u>
<u>Patrol Aircraft Sqns.<sup>a/</sup></u>								
P-2(P2V)		343	259	225	185	139	97	45
P-3A(P3V-1)			38	63	97	131	164	197
S-2(S2F-1)		126						
Seaplanes(P5M)		84	80	80	80	80	80	80
Support Aircraft		7	6	6	6	6	6	6
Total Patrol	<u>370</u>	<u>560</u>	<u>383</u>	<u>374</u>	<u>368</u>	<u>356</u>	<u>347</u>	<u>328</u>

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TABLE 9 - GENERAL PURPOSE FORCES - NAVY AND MARINE CORPS OPERATING AIRCRAFT  
(Active Forces and Reserves) Cont'd

	End Fiscal Year							
	1961	1962	1963	1964	1965	1966	1967	1968
<u>Fleet Tact Spt Sqns</u>								
Heavy Transports		30	31	31	30	30	30	30
Medium Transports		11	12	12	12	12	12	12
C-1A(TF-1)		27	26	28	28	28	28	28
Total Flt Tact Spt Sqns	<u>64</u>	<u>68</u>	<u>69</u>	<u>71</u>	<u>70</u>	<u>70</u>	<u>70</u>	<u>70</u>
<u>Fleet Support Squadrons</u>								
Opnl Test & Dev		34	34	34	32	31	30	30
Helicopter Cmbt Spt		118	100	102	108	104	119	116
Fleet Util. Sqns		166	140	140	140	138	138	138
Total Flt Support	<u>279</u>	<u>318</u>	<u>274</u>	<u>276</u>	<u>280</u>	<u>273</u>	<u>287</u>	<u>284</u>
<u>Other Support Aircraft</u>	<u>295</u>	<u>311</u>	<u>297</u>	<u>293</u>	<u>260</u>	<u>234</u>	<u>232</u>	<u>223</u>
TOTAL ACTIVE NAVAL ACFT	<u>3107</u>	<u>3534</u>	<u>3238</u>	<u>3217</u>	<u>3125</u>	<u>3062</u>	<u>3071</u>	<u>3021</u>
<u>Marine Operating A/C</u>								
<u>Air Wing Aircraft</u>								
F-4B (F4H-1)		2	39	90	105	150	195	225
F-8 (F8U)		158	162	162	120	75	30	
F-6A (F4D-1)		77	69	18				
A-4 (A4D-2/2N/5)		258	260	256	240	220	220	200
AF-1E (FJ-4B)								
A-6A (A2F-1)				4	15	30	30	45
EA-6A (A2F-1H)				2	16	24	27	27
RF-8A (F8U-1P)		26	27	27	22	6		
RF-4B (RF4H)					5	21	27	27
RF-10B (F3D-2Q)		24	24	22	11	3		
CH-46A (HRB-1)			2	22	50	98	189	244
UH-34D (HUS-1)		223	278	282	272	262	171	116
Other Helicopters		65	65	69	102	123	139	144
Support Aircraft		193	128	124	103	99	97	86
Total Air Wing A/C	<u>964</u>	<u>1026</u>	<u>1054</u>	<u>1078</u>	<u>1061</u>	<u>1111</u>	<u>1125</u>	<u>1114</u>
FMF-Support-Aircraft	49	55	52	52	56	56	54	53
Air Bases-Support A/C	53	54	50	46	45	45	45	45
TOTAL ACTIVE MARINE A/C	<u>1066</u>	<u>1135</u>	<u>1156</u>	<u>1176</u>	<u>1162</u>	<u>1212</u>	<u>1224</u>	<u>1212</u>
<u>Navy &amp; Marine Reserve</u>								
Fighters	149	269	154	128	138	101	119	156
Attack	97	110	192	200	200	200	200	200
ASW-Patrol	70	49	132	132	132	132	132	132
VS-Search	170	67	120	120	120	120	120	120
HS-Search	58	74	74	74	74	74	76	74
Transports	50	70	74	73	73	73	72	71
Support Aircraft	89	110	93	93	93	89	83	79
TOTAL RESERVE	<u>683</u>	<u>749</u>	<u>839</u>	<u>820</u>	<u>830</u>	<u>789</u>	<u>802</u>	<u>832</u>

a/ Includes Replacement Training Groups and Squadrons.

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TABLE 10 - GENERAL PURPOSE FORCES - NAVY AND MARINE CORPS  
AIRCRAFT PROCUREMENT PROGRAM<sup>a</sup>

	<u>FY 62</u>	<u>FY 63</u>	<u>FY 64</u>	<u>FY 65</u>	<u>FY 66</u>	<u>FY 67</u>	<u>FY 68</u>
<u>Navy Aircraft</u>							
Fighter							
F-4B (F4H-1)	79	99 <sup>c</sup>	88	88	75	75	75
F-111B (TFX)					15	24	24
F-8E (F8U-2NE)	68	60					
Total	<u>147</u>	<u>159</u>	<u>88</u>	<u>88</u>	<u>90</u>	<u>99</u>	<u>99</u>
Attack							
A-4E (A4D-5)	119	100	75	80	80		
A-4C (A4D-2N)	20						
A-6A (A2F-1)	23	43	33	28	28		
Total	<u>162</u>	<u>143</u>	<u>108</u>	<u>108</u>	<u>108</u>		
Recon/Countermeasures							
A-5C (A3J-3)	20	23	8				
Flt Air Early Wing							
E-2A (W2F-1)	12	24	24	36	36	36	36
Carrier ASW							
S-2E (S2F-3)	51	48	48	48			
SH-3A (HSS-2)	53	36	36	48	48		
Total	<u>104</u>	<u>84</u>	<u>84</u>	<u>96</u>	<u>48</u>		
Patrol							
P-3A (P3V-1)	42	48	48	48	48	48	48
SP-2H (P2V-7S)	5						
Total	<u>47</u>	<u>48</u>	<u>48</u>	<u>48</u>	<u>48</u>	<u>48</u>	<u>48</u>
Flt Spt Hecptrs							
CH-46A (HRB-1)						35	
UH-34D (HUS-1)	14						
UH-2A (HU2K-1)	48	36					
UH-1E (HU-1E)				8	6	6	4
Total	<u>62</u>	<u>36</u>		<u>8</u>	<u>6</u>	<u>41</u>	<u>4</u>
Flt Tact Support							
C/KC-130 (GV-1U/2U)	7		4				
C-2A (W2F-COD)			b/	12	11		
Total	<u>7</u>		<u>4</u>	<u>12</u>	<u>11</u>		
Trainer							
TC-4B (VRM)			10	10			
T-2B (T2J-2)			12	72	72	72	72
T-39D (T3J-1)	10	32					
U-8F (VT(AP))			25	17			
Total	<u>10</u>	<u>32</u>	<u>47</u>	<u>99</u>	<u>72</u>	<u>72</u>	<u>72</u>

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**TABLE 10 - GENERAL PURPOSE FORCES - NAVY AND MARINE CORPS  
AIRCRAFT PROCUREMENT PROGRAM (Cont'd)**

	<u>FY 62</u>	<u>FY 63</u>	<u>FY 64</u>	<u>FY 65</u>	<u>FY 66</u>	<u>FY 67</u>	<u>FY 68</u>
<b>Mission Support</b>							
C-4B (VRM)				8	9	9	9
T-39A (T3J-1)				12	14	14	14
U-3 (VT-AP)				30	30	30	30
<b>Total</b>				<u>50</u>	<u>53</u>	<u>53</u>	<u>53</u>
<b>Total Navy Aircraft</b>	<u>571</u>	<u>549</u>	<u>411</u>	<u>545</u>	<u>472</u>	<u>349</u>	<u>312</u>
<b>Marine Corps Aircraft</b>							
<b>Fighter</b>							
F-4C (F4H-1)	39	51	44	44	57	57	57
F-111B (TFX)							28
F-8E (F8U-2NE)	34	30					
<b>Total</b>	<u>73</u>	<u>81</u>	<u>44</u>	<u>44</u>	<u>57</u>	<u>57</u>	<u>85</u>
<b>Attack</b>							
A-4E (A4D-5)	61	80	45	40	40		
A-6A (A2F-1)			15	20	20		
<b>Total</b>	<u>61</u>	<u>80</u>	<u>60</u>	<u>60</u>	<u>60</u>		
<b>Recon/Countermeasures</b>							
EA-6A (A2F-1H)	1	12	12	9			
RF-4C (RF4H-1)			12	24			
<b>Total</b>	<u>1</u>	<u>12</u>	<u>24</u>	<u>33</u>			
<b>Helicopters</b>							
CH-46A (HRB-1)	14	36	60	90	120	85	96
CH-53A (HHX)			16	24	24	24	
UH-1E (HU-1E)		30	48	40	18	18	8
UH-2A (HU2K-1)			18				
UH-34D (HUS-1)	85						
<b>Total</b>	<u>99</u>	<u>66</u>	<u>142</u>	<u>154</u>	<u>162</u>	<u>127</u>	<u>104</u>
<b>Total Navy &amp; Marine Corps Aircraft</b>	<u>FY 61</u> <u>688</u>	<u>FY 62</u> <u>805</u>	<u>FY 63</u> <u>788</u>	<u>FY 64</u> <u>681</u>	<u>FY 65</u> <u>836</u>	<u>FY 66</u> <u>751</u>	<u>FY 67</u> <u>533</u> <u>FY 68</u> <u>501</u>
<b>Procurement Cost (In Millions)</b>	\$1,833	\$2,275	\$2,192	\$2,004			

- a/ Aircraft and cost shown are mainly for General Purpose Forces.  
b/ Excludes 4 aircraft financed under RDT&E in FY 64.  
c/ Includes 27 aircraft to be procured from Air Force.

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TABLE 11 - GENERAL PURPOSE FORCES - AIR FORCE AND AIR NATIONAL GUARD

	End Fiscal Year							
	1961	1962	1963	1964	1965	1966	1967	1968
<u>Active Forces<sup>a/</sup></u>								
Tactical Fighters								
F-84		300	222	129				
F-86		75						
F-100	910	860	782	660	585	416	147	
F-101	75	66	66	66	66			
F-104	72	129	54	54				
F-105	122	265	394	516	516	516	498	462
F-4C				93	369	613	882	1029
F-111 (TFX)							18	54
Total A/C	1179	1695 <sup>c/</sup>	1518	1518	1536	1545	1545	1545
No. of Wings	16	23	21	21	21	21	21	21
Tactical Bombers								
B-57	48	48	48	48				
B-66	48							
Tactical Recon								
RF-84		72						
RF-101	144	128	128	128	128	112	108	108
RF-4C					72	198	252	252
RB-66	108	108	108	108	36			
Total A/C	252	308 <sup>c/</sup>	236	236	236	310	360	360
No. of Squadrons	14	18	14	14	14	18	20	20
KB-50 Tankers	120	120	100	60	40			
COIN Various A/C Variable UE		64	88	184	184	184	184	184
Interceptor Fighters								
F-89	12	12						
F-102	287	275	269	243	237	231	231	219
Total Active A/C	1946	2522	2259	2289	2233	2278	2320	2308
<u>Air National Guard<sup>b/</sup></u>								
Tactical Fighters								
F-84	300		67	147	150			
F-86	125	50	127	100	25			
F-100	100	50	132	144	250	375	375	375
F-101						67	64	50
F-104					50	50	49	48
F-105				33	32	31	48	72
Total	525	100	326	424	507	523	536	545
Tactical Recon								
B/RB-57	60	60	60	60	60	60	60	60
RF-84	144	54	137	133	129	124	120	116
KC-97 Tankers		10	30	30	30	30	30	30
Total ANG A/C	204	224	553	647	726	737	746	751

a/ Excludes 120 MATADOR Missiles in FY 1961; 72 MACE A's in FY 1962 and 88 MACE A's in FY 1963 thru FY 1968; 36 MACE B's in FY 62 & 54 MACE B's in FY 63 thru FY 68.

b/ Possessed aircraft.

c/ Includes Air National Guard active status.

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TABLE 12 - GENERAL PURPOSE FORCES - AIR FORCE AIRCRAFT PROCUREMENT PROGRAM

<u>Type of Aircraft</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>Fiscal Year</u>		<u>1966</u>	<u>1967</u>	<u>1968</u>
				<u>1964</u>	<u>1965</u>			
F-105	180	231	107					
F-4C(F-110)		30	307	343	336	336	19	
F-111(TFX)					10	55	112	237
RF-4C(RF-110)		2	24	129	164			
RF-111(R-TFX)						2	41	60
Total	<u>180</u>	<u>263</u>	<u>438</u>	<u>472</u>	<u>510</u>	<u>393</u>	<u>172</u>	<u>297</u>
<u>Procurement Cost</u> <u>(In Millions)a/</u>	<u>\$409</u>	<u>\$667</u>	<u>\$1135</u>	<u>\$1099</u>				

a/ Includes flyaway aircraft, initial spares, advance buy, peculiar AGE and training devices.

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TABLE 13 - AIRLIFT AND SEALIFT FORCES<sup>a/</sup>

	1961	1962	1963	<u>End Fiscal Year</u>		1966	1967	1968
				<u>1964</u>	<u>1965</u>			
<u>Active Forces</u>								
C-97		48						
C-118	107	95	95	48				
C-121	56	56	28					
C-123	96	80	80	80	80	48		
C-124	260	316	300	300	192	80		
C-130	208	240	299	444	540	540	540	540
C-133	44	44	44	44	44	40	40	40
C-135		42	42	42	42	42	42	38
C-141					16	80	160	208
Total Active	<u>771</u>	<u>921<sup>b/</sup></u>	<u>888</u>	<u>966</u>	<u>914</u>	<u>830</u>	<u>782</u>	<u>826</u>
<u>Air Force Reserve</u>								
C-119	592	592	592	592	448	384	288	288
C-123	48	48	48	48	48	48	48	48
C-124	40		20 <sup>c/</sup>	20 <sup>c/</sup>	112	216	288	288
<u>Air National Guard</u>								
C-97	88	40	128	128	128	128	128	128
C-123	8	8	8	8	8	8	8	8
KC-97								
Total Res & Gd	<u>776</u>	<u>688</u>	<u>796</u>	<u>796</u>	<u>744</u>	<u>784</u>	<u>760</u>	<u>760</u>
No. of Res ANG A/C with Strategic Lift Capability								
30-day airlift capability		40	148	148	240	344	416	416
to S.E. Asia (tons)	14,700	20,000	23,000	25,300	29,500	39,400	52,000	54,500
To Europe (tons)	32,000	42,400	49,000	54,100	62,300	78,800	103,300	107,100
<u>Sealift (No of active ships)</u>								
Troop Ships	16	16	16	16	16			
Cargo Ships								
General Purpose	13	14	14	14	14	13	12	11 <sup>d/</sup>
Roll-on/Roll-off	2	2	2	2	2	3	4	5
Special Purpose	44	44	44	44	44	44	44	44
Tankers	24	25	25	25	25	25	25	25
Forward Floating Base			3	3	3	3	3	3
Project Ships			2	2	2	2	2	2
Total	<u>99</u>	<u>101</u>	<u>106</u>	<u>106</u>	<u>106</u>	<u>90</u>	<u>90</u>	<u>90</u>

a/ Numbers of aircraft are derived by multiplying authorized squadron unit equipment by the number of squadrons.

b/ Includes 48 C-97's activated from the ANG and 40 C-124's activated from the Air Force Reserve.

c/ Possessed aircraft.

d/ Builds up to 7 by FY 1970.



**SECRET**

TABLE 14 - AIRLIFT AND SEALIFT PROCUREMENT PROGRAM

	Fiscal Year							
	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
<u>Airlift</u>								
C-130	57	93	144	114				
C-135	20	15						
C-141			16	45	84	84	18	
	—	—	—	—	—	—	—	—
Total	<u>77</u>	<u>108</u>	<u>160</u>	<u>159</u>	<u>84</u>	<u>84</u>	<u>18</u>	—
<u>Sealift</u>								
Roll-on/Roll-off Cargo Ships			1	1	1	1	1	
<u>Total Procurement Cost</u> (In Millions)								
Airlift <sup>a/</sup>	\$ 236	\$ 456	\$ 540	\$ 643				
Sealift	—	—	<u>20</u>	<u>22</u>				
Total	<u>\$ 236</u>	<u>\$ 456</u>	<u>\$ 560</u>	<u>\$ 665</u>				

a/ Includes flyaway aircraft, initial spares, advance buy, peculiar AGE, and training devices.

**SECRET**

TABLE 15 - SUMMARY OF STRENGTH, DRILL STATUS, ETC.  
FOR RESERVE AND GUARD FORCES

(In Thousands)

	<u>1961</u>	<u>End Fiscal Year</u>		<u>1964</u>
		<u>1962a/</u>	<u>1963</u>	
Army Reserve				
Paid Drill Training	301.8	261.5	274.5	281.0 <sup>b/</sup>
Other Paid Training	<u>59.3</u>	<u>48.3</u>	<u>48.4</u>	<u>80.4</u>
Total Paid Status	361.1	309.8	322.9	361.4
Army National Guard				
Paid Drill Training	393.8	361.0	375.5	384.4 <sup>b/</sup>
Other Paid Training	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Paid Status	393.8	361.0	375.5	384.4
Naval Reserve				
Paid Drill Training	129.9	111.3	122.0	126.0
Other Paid Training	<u>8.0</u>	<u>7.9</u>	<u>7.8</u>	<u>10.1</u>
Total Paid Status	137.9	119.2	129.8	136.1
Marine Corps Reserve				
Paid Drill Training	43.8	46.6	45.5	45.5
Other Paid Training	<u>2.1</u>	<u>2.0</u>	<u>2.8</u>	<u>3.4</u>
Total Paid Status	46.0	48.6	48.3	48.9
Air Force Reserve				
Paid Drill Training	64.5	58.4	61.0	61.0
Other Paid Training	<u>11.5</u>	<u>10.7</u>	<u>9.0</u>	<u>11.2</u>
Total Paid Status	75.9	69.2	70.0	72.2
Air National Guard				
Paid Drill Training	70.9	50.3	72.0	72.0
Other Paid Training	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Paid Status	70.9	50.3	72.0	72.0
Total Reserve Forces				
Paid Drill Training	1004.8	889.1	950.5	969.9
Other Paid Training	<u>80.9</u>	<u>68.9</u>	<u>67.9</u>	<u>105.1</u>
Total Paid Status	1085.7	958.0	1018.4	1075.0

a/ Excludes reservists called to active duty during the "Berlin crisis".

b/ The programmed strength for the Army Reserve Components is 700,000, Army Reserve 300,000 and National Guard 400,000. The figures shown above are estimates of strengths that will actually be attained.

c/ Detail may not add to totals due to rounding.

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TABLE 16 - FINANCIAL SUMMARY OF RESEARCH AND DEVELOPMENT

(Total Obligational Authority in Millions)

	Prior Years	FY 1962	FY 1963	FY 1964	Estimated Cost To Complete
<u>Research</u>					
Army	\$	\$ 73	\$ 96	\$ 106	\$
Navy		119	126	143	
Air Force		70	83	89	
ARPA		<u>25</u>	<u>22</u>	<u>24</u>	
Total Research		<u>\$ 287</u>	<u>\$ 327</u>	<u>\$ 362</u>	
<u>Exploratory Developments</u>					
Army		141	178	217	
Navy		332	357	368	
Air Force		297	307	330	
ARPA		<u>226</u>	<u>228</u>	<u>256</u>	
Total Explor. Developmts:		<u>997</u>	<u>1,070</u>	<u>1,171</u>	
<u>Advanced Developments</u>					
Army:					
Tri-Service V/STOL Concepts	1	7	12	10	15
New Surveillance a/c (including P-1127 Hawker)	2	7	12	10	7
Communications Satellite	80	103	51	20	
ZMAR - SPRINT Hard Point Defense	5	18	37	0	
Heavy Lift Helicopter	0	0	15	4	
Anti-tank Weapon System	34	25	28	5	
Other Advanced Developments		<u>4</u>	<u>6</u>	<u>6</u>	
Sub-total Adv. Dev.-Army		164	161	55	
Navy:					
Tri-Service V/STOL Concepts	1	6	12	10	15
P-1127 Hawker	0	0	2	3	5
Undersea Warfare (including ARTEMIS, TRIDENT, and other ASW projects)		33	61	75	
Advanced Sea Based Deterrent	0	0	15	12	
Other Advanced Development		<u>18</u>	<u>14</u>	<u>27</u>	
Sub-total Adv. Dev.-Navy		57	104	127	

TABLE 16 - FINANCIAL SUMMARY OF RESEARCH AND DEVELOPMENT (cont'd.)

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<u>Advanced Developments (continued)</u>	<u>Prior Years</u>	<u>FY 1962</u>	<u>FY 1963</u>	<u>FY 1964</u>	<u>Estimated Cost To Complete</u>
	\$	\$	\$	\$	\$
<b>Air Force:</b>					
Tri-Service V/STOL Concepts	1	6	12	11	10
V/STOL A/C Technology (including P-1127 Hawker)	0	0	2	10	18
Communications Satellite		0	41	52	
X-15	150	10	10	7	3
DYNASOAR	109	101	131	125	379
Space Components		8	17	19	
Low Altitude Supersonic Vehicles	24	7	12	15	30
DISCOVERER	279	116	130	79	104
MIDAS	184	164	75	35	70
Stellar Inertial Guidance		3	51	30	25
Advanced ICBM		0	10	15	
Large Solid Booster		14	26	34	
Remote Detection of Missile Launch		0	7	10	12
Other Advanced Developments		41	78	104	
Sub-total Adv. Dev. - Air Force		470	602	546	
<b>TOTAL ADVANCED DEVELOPMENTS</b>		<u>691</u>	<u>867</u>	<u>728</u>	
<b><u>Engineering Developments</u></b>					
<b>Army:</b>					
NIKE-ZEUS	836	272	237	89	90
NIKE-X		0	0	246	989
Division Support Missile B (LANCE)	4	1	8	45	89
SHILLELAGH	(33)	(23)	(20)	32	10
Tank Main Battle		0	1	8	22
Gen. Sheridan Vehicle (AR/AAV)	5	7	12	5	0
Surveillance & Target Acquisition		45	48	50	
Communications & Electronic Equipment & Components		53	106	142	
Air Mobility		36	23	39	
Artillery Weapons & Atomic Munitions		26	42	37	
Infantry Weapons		6	16	19	
Other Engineering Developments		69	96	97	
Sub-total Eng. Dev. - Army		515	589	809	
<b>Navy:</b>					
Wire Guided Torpedo EX 10	0	0	4	13	38
Aircraft Engines		0	4	16	90
Adv. Design ASW Destroyer Escort	0	0	0	30	116
Short Range Guided AS Weapon		0	0	11	18
Avionics Developments		0	5	10	
TYPHON	78	44	55	60	108
SEA MAULER	0	0	0	6	12
TRANSIT	61	17	25	16	23
Marine Corps Developments		7	6	13	
Other Engineering Developments		29	45	80	
Sub-total Eng.Dev. - Navy		97	144	255	

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TABLE 16 - FINANCIAL SUMMARY OF RESEARCH AND DEVELOPMENT (cont'd.)

	Prior Years	FY 1962	FY 1963	FY 1964	Estimated Cost to Complete
<u>Eng. Developments (continued)</u>	\$	\$	\$	\$	\$
Air Force:					
B-70	800	220	221	81	28
Reserve for RS-70		0	61	0	0
MMRBM	0	4	42	150	221
Missile Re-entry Systems		0	119	219	
Satellite Inspector	8	26	40	40	20
TITAN III - Space Booster	0	35	261	330	182
ATLAS Space Booster	0	0	10	3	0
Other Engineering Developments		<u>94</u>	<u>99</u>	<u>81</u>	0
Sub-total Eng. Dev. - Air Force		379	853	904	
TOTAL ENGINEERING DEVELOPMENTS		<u>991</u>	<u>1,586</u>	<u>1,968</u>	
<u>Management and Support</u>					
Army:					
White Sands Missile Range		54	66	74	
General Support		<u>145</u>	<u>145</u>	<u>158</u>	
Sub-total Management & Support - Army		199	211	232	
Navy:					
Pacific Missile Range		116	136	173	
AUTEC		15	23	20	
General Support		<u>198</u>	<u>200</u>	<u>200</u>	
Sub-total Mgmt & Support - Navy		329	359	393	
Air Force:					
Atlantic Missile Range		196	305	249	
ASTIA		3	4	6	
General Support (including "Development Support" contract effort)		<u>641</u>	<u>635</u>	<u>679</u>	
Sub-total Mgmt & Support - Air Force		840	944	934	
TOTAL, MANAGEMENT & SUPPORT		<u>1,368</u>	<u>1,514</u>	<u>1,559</u>	
<u>Emergency Fund</u>		-	<u>120</u>	<u>150</u>	
TOTAL RESEARCH & DEVELOPMENT (Excluding Weapons Systems Approved for Production)		<u>4,334</u>	<u>5,481</u>	<u>5,938</u>	
Sub-Total -- Army		1,092	1,234	1,419	
Navy		934	1,090	1,287	
Air Force		2,056	2,787	2,803	
ARPA		252	250	280	
Emergency Fund		-	<u>120</u>	<u>150</u>	
		<u>4,334</u>	<u>5,481</u>	<u>5,938</u>	

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TABLE 17 - RECAPITULATION OF DEPARTMENT OF DEFENSE SPACE PROGRAM  
(Total Obligational Authority in Millions)

	FY 1961	FY 1962	FY 1963	FY 1964
<u>Spacecraft Mission Projects</u>				
X-15 (Research Rocket Aircraft)	\$ 14.9	\$ 9.6	\$ 10.0	\$ 7.0
DYNASOAR (Manned Space Flight)	58.0	101.3	130.5	125.4
DISCOVERER (Component & Development)	60.0	115.9	129.9	79.1
MIDAS (Missile Alarm System)	109.4	164.1	75.0	35.0
Communications Satellite System	55.2	103.0	95.0	76.0
ANNA (Geodetic Satellite)	6.6	4.3	3.0	1.2
VELA HOTEL (Nuclear Test Detection)	3.1	16.7	25.0	25.7
TRANSIT (Navigation Satellite)	23.6	22.0	45.4	35.9
Satellite Inspector	8.2	26.0	40.0	40.0
Satellite Intercept	-	-	6.0	28.5
NIKE-ZEUS Satellite Intercept	-	7.0	8.0	-
Other	2.5	7.0	5.5	5.2
Subtotal, Spacecraft Mission Proj.	\$ 341.5	\$ 576.9	\$ 573.3	\$ 459.0
<u>Vehicle and Engine Development</u>				
TITAN III	-	\$ 35.2	\$ 261.1	\$ 329.6
AGENA D	3.7	21.6	11.6	-
ATLAS SPACE BOOSTER	-	-	10.0	2.8
Large Solid Booster	-	13.6	25.7	34.3
Spaceplane Technology	-	7.6	17.0	19.0
Space Test Electric Propulsion	-	3.0	3.0	3.0
Vehicle Flight Control	-	1.8	5.0	5.5
Subtotal, Veh. and Eng. Develop.	3.7	\$ 82.8	\$ 333.4	\$ 394.2
<u>Ground Support</u>				
Atlantic Missile Range (Space-related)	35.5	\$ 60.5	\$ 107.6	\$ 97.4
Pacific Missile Range "	14.9	11.6	20.5	39.2
White Sands Missile Range "	-	.5	1.9	2.2
SPADATS (Tracking and Detection)	3.3	21.2	30.4	18.2
SPASUR (Tracking and Detection)	4.1	4.1	8.6	21.4
Other	-	.5	2.4	7.9
Subtotal, Ground Support	57.8	\$ 98.4	\$ 171.4	\$ 186.3
<u>Supporting Research and Development</u> (Includes Applied Research and Component Development)	65.1	\$ 150.8	\$ 163.2	\$ 177.1
<u>General Support</u> (Includes in-house programs, develop- ment support contractors, special facility construction, and support of space operations not otherwise charged to specific programs)	325.7	\$ 375.4	\$ 376.3	\$ 451.0
Total, Defense Space Program	\$ 793.8	\$ 1,284.3	\$ 1,617.6	\$ 1,667.6

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TABLE 18 - GENERAL SUPPORT  
(Total Obligational Authority In Millions)

	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>INDIVIDUAL TRAINING AND EDUCATION</u>			
Recruit Training	\$ 623	\$ 599	\$ 712
Technical Training	998	1010	1056
Professional Training	214	224	223
Flight Training	632	639	726
Other	386	376	374
TOTAL	<u>2853</u>	<u>2848</u>	<u>3091</u>
<u>INTELLIGENCE AND SECURITY</u>			
			
<u>COMMUNICATIONS - TOTAL</u>	<u>614</u>	<u>792</u>	<u>972</u>
<u>LOGISTIC SUPPORT</u>			
Transportation	558	517	505
Procurement and Supply Operations	1733	1675	1807
Industrial Preparedness	259	152	152
Military Family Housing	302	707	740
Material Maintenance	560	485	443
Other		42	45
TOTAL	<u>3412</u>	<u>3578</u>	<u>3692</u>
<u>MEDICAL SERVICES - TOTAL</u>	<u>752</u>	<u>767</u>	<u>765</u>
<u>COMMAND AND GENERAL SUPPORT</u>			
Command and Direction	756	796	814
Weather Service	124	126	129
Air Rescue/Recovery	79	47	136
National Emergency Command Posts	32	40	18
Transients, Patients and Prisoners	252	261	284
Construction Support Activities	111	139	122
Deep Freeze	25	29	29
Other Command and General Support	1470	1639	1911
Activities			
TOTAL	<u>2849</u>	<u>3077</u>	<u>3443</u>
<u>DEFENSE ATOMIC SUPPORT PROGRAM - TOTAL</u>	<u>186</u>	<u>182</u>	<u>115</u>
<u>MISCELLANEOUS DEPARTMENT-WIDE ACTIVITIES</u>			
Contingencies	13	15	15
Claims	17	19	19
All Other	45	79	83
TOTAL	<u>75</u>	<u>113</u>	<u>117</u>
<u>RETIRED PAY - TOTAL</u>	<u>896</u>	<u>1029</u>	<u>1163</u>
GRAND TOTAL	<u>12748</u>	<u>13689</u>	<u>14622</u>

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TABLE 19 - FINANCIAL SUMMARY OF CIVIL DEFENSE

(Total Obligational Authority in Millions)

	<u>FY 62</u>	<u>FY 63</u>	<u>FY 64</u>
<u>Shelter Survey, Mark and Stock</u>	\$139.2	\$ 88.9 <sup>a/</sup>	\$ 7.8
<u>Shelter - Financial Assistance</u> <u>Non-Profit Institutions</u>			175.0
<u>Shelter in Federal Buildings</u>	19.8 <sup>b/</sup>		20.0
<u>Warning and Detection</u>			
Warning and Alert	6.8	4.1 <sup>c/</sup>	5.0
Radiological Detection and Monitoring	24.7	10.0	3.5
<u>Communications and Control</u>	4.6	2.9 <sup>c/</sup>	4.5
<u>Training, Education and Public Information</u>	6.9	14.7	20.5
<u>Financial Assistance</u>			
Survival Supplies, Equipment and Training	6.2	6.0	5.0
Emergency Operating Centers	3.0	8.0	10.0
Personnel and Administrative Costs	9.7	13.5	18.0
<u>Research</u>	19.0	11.0	15.0
<u>Management</u>	12.4	13.6	15.7
<b>TOTAL</b>	<u>\$252.3</u>	<u>\$172.7</u>	<u>\$300.0</u>

a/ Includes proposed 1963 supplemental appropriation of \$61.9 million.

b/ Includes \$2.3 million of prior year funds for construction of Regional Center

c/ Excludes \$2.2 million transferred to Army for civil defense warning and communications networks, as follows:

Warning and Alert	\$1.3 million
Communications and Control	.9 million



**TABLE 20 - DEPARTMENT OF DEFENSE PROCUREMENT AND LOGISTICS  
COST REDUCTION PROGRAM  
(in millions)**

		Recurring Annual Savings to be Realized from Actions in FY's '62 thru Current Year				
		As estimated 1/15/63			As reported to Pres.	
		1963	1964	1965	FY 1963	FY 1967
1.	Buying Only What We Need					
a.	Refining requirements calculations:					
	(1) Major items of equipment	a/	a/	a/	0	0
	(2) Initial spares provisioning	\$ 104	\$ 157	\$ 210	0	0
	(3) Secondary items	420	502	550	\$ 150	\$ 300
	(4) Technical manuals	8	25	30	0	0
	Total from refinement of requirements	532	684	790	150	300
b.	Increased use of excess inventory in lieu of new procurement					
	(1) Equipment and supplies	189	284	394	225	450
	(2) Idle production equipment	2	10	21	0	0
	(3) Excess contractor inventory	20	20	20	0	0
	Total from increased use of excess inventory	211	314	435	225	450
c.	Eliminating "goldplating"	64	100	100	64	100
d.	Inventory item reduction	1	4	5	0	0
2.	Buying at the Lowest Sound Price					
a.	Shift from non-competitive to competitive procurement:					
	Total % competitive b/	37.0	38.4	39.9		
	Amount of saving	289	391	494	160	480
b.	Shift from CPFF to fixed or incentive price:					
	Total % CPFF c/	25.8	19.1	12.3		
	Amount of saving	289	464	639	100	600
3.	Reducing Operating Costs					
a.	Terminating unnecessary operations	292	357	442	257	600
b.	Standardizing and simplifying procedures:					
	(1) Consolidation of 16 req. systems into 1 on 7/1/62	10	20	20	20	20
	(2) Consol. of 81 transp. docs into 1	0	22	32	30	30
	(3) Reduction of contractor reports	1	4	25	30	30
c.	Consol. & increasing efficiency of opns.					
	(1) DSA operating expense savings	31	33	42	28	50
	(2) DCA & Comm. system savings	16	20	25	-	30
	(3) Improv. transp. & traffic mgmt.	17	23	23	40	65
	(4) Improv. equip. maint. mgmt.	108	199	297	48	300
	(5) Administrative vehicles	3	9	11	0	0
	(6) Improv. Military Housing mgmt.	6	11	19	3	27
	(7) Improv. real property mgmt.	24	34	45	0	0
	Total Program	\$1894	\$2689	\$3444	\$1155 d/	\$3082

a/ Savings will be reported as identified. In FY '62 "requirements" for major items of equipment were reduced by \$24 billion. In FY '63, the Army reduced 1964 pipeline requirements by \$500 million; and substituted an expanded production base for a mobilization reserve inventory, saving a net of \$36 million, a total saving of \$536 million.

b/ FY 1961 was 32.9%; total annual conversion from sole source of \$1.9 billion -- savings are 25% per dollar converted.

c/ For the first 9 months of FY 1961, CPFF was 38%; a reduction of \$6 billion is required to reduce that percentage to 12.3%; savings are 10% per dollar converted.

d/ FY 1963 goal reported in 7/5/62 memo to President, on a conservative basis, as \$750 million.

TABLE 21  
Department of Defense  
FY 1963 BUDGET PROGRAMS AND NEW OBLIGATIONAL AUTHORITY

By Appropriation Title

(Millions of Dollars)

Appropriation Title	Strategic Retaliatory Forces	Continental Air and Missile Defense Forces	General Purpose Forces	Airlift and Sealift Forces	Reserve and Guard Forces	Research and Develop- ment	General Support	Civil Defense	Military Assis- tance	Total Programs (TOA)	Financing Adjust- ments	New Obli- gational Authority
<b>MILITARY PERSONNEL</b>												
Military Personnel, Army	-	95.3	2,603.3	9.9	136.4	42.5	1,055.1	-	-	3,942.4	-350.0	3,592.4
Military Personnel, Army (Prop. for separate trans.)	-	4.5	49.7	0.2	6.0	2.0	40.3	-	-	102.7	-	102.7
Military Personnel, Navy	41.2	48.3	1,552.6	23.3	72.2	54.3	940.6	-	-	2,732.5	-25.0	2,707.5
Military Personnel, Navy (Prop. for separate trans.)	0.2	0.2	7.2	0.1	0.3	0.3	4.4	-	-	12.7	-	12.7
Military Personnel, Marine Corps	0.2	0.6	473.0	-	16.2	0.8	165.8	-	-	656.5	-	656.5
Military Personnel, Marine Corps (Prop. for sep. trans.)	-	-	4.9	-	0.1	-	1.7	-	-	6.7	-	6.7
Military Personnel, Air Force	1,137.3	485.2	631.2	316.1	32.7	133.7	1,359.3	-	-	4,095.5	-70.0	4,025.5
Military Personnel, Air Force (Prop. for sep. trans.)	13.9	5.9	7.7	3.9	0.4	1.6	16.6	-	-	50.0	-	50.0
Reserve Personnel, Army	-	-	-	-	239.2	-	-	-	-	239.2	-	239.2
Reserve Personnel, Navy	-	-	-	-	85.6	-	-	-	-	85.6	-	85.6
Reserve Personnel, Marine Corps	-	-	-	-	28.1	-	-	-	-	28.1	-	28.1
Reserve Personnel, Air Force	-	-	-	-	50.1	-	-	-	-	50.1	-	50.1
National Guard Personnel, Army	-	-	-	-	261.8	-	-	-	-	261.8	-	261.8
National Guard Personnel, Air Force	-	-	-	-	53.0	-	-	-	-	53.0	-	53.0
Retired Pay, Defense	-	-	-	-	-	-	1,029.0	-	-	1,029.0	-	1,029.0
<b>TOTAL - Military Personnel</b>	<b>1,192.8</b>	<b>640.0</b>	<b>5,329.6</b>	<b>353.5</b>	<b>982.1</b>	<b>235.2</b>	<b>4,612.8</b>	<b>-</b>	<b>-</b>	<b>13,345.8</b>	<b>-445.0</b>	<b>12,900.8</b>
<b>OPERATION AND MAINTENANCE</b>												
Operation & Maintenance, Army	-	70.9	1,246.5	17.0	145.6	-	1,838.3	-	-	3,318.4	-	a 3,318.4
Operation & Maintenance, Army (Prop. for sep. trans.)	-	-	13.0	-	0.4	-	24.1	-	-	37.5	-	37.5
Operation & Maintenance, Navy	120.6	58.6	1,471.2	9.9	85.1	27.0	1,036.8	-	-	2,809.4	-	a 2,809.4
Operation & Maintenance, Navy (Prop. for sep. trans.)	0.1	0.1	1.5	-	0.1	-	1.0	-	-	2.8	-	2.8
Operation & Maintenance, Marine Corps	-	-	80.4	-	4.5	-	101.6	-	-	186.6	-	a 186.6
Operation & Maintenance, Marine Corps (Prop sep trans)	-	-	0.2	-	-	-	0.3	-	-	0.5	-	0.5
Operation & Maintenance, Air Force	911.6	640.8	537.4	182.3	97.8	45.1	1,902.5	-	-	4,317.5	-	a 4,317.5
Operation & Maintenance, Air Force (Prop. sep. trans.)	1.4	1.0	0.8	0.3	0.2	0.1	3.0	-	-	6.8	-	6.8
Operation & Maintenance, Defense Agencies	-	-	-	-	-	-	356.0	-	-	356.0	-	356.0
Operation & Maintenance, Army National Guard	-	-	-	-	174.4	-	-	-	-	174.4	-	174.4
Operation & Maintenance, Air National Guard	-	-	-	-	194.4	-	-	-	-	194.4	-	194.4
National Board for the Promotion of Rifle Practice, Army	-	-	-	-	-	-	0.6	-	-	0.6	-	0.6
Operation & Maintenance, Alaska Comm. Sys., Air Force/	-	-	-	-	-	-	6.7	-	-	6.7	-	6.7
Claims, Defense	-	-	-	-	-	-	19.0	-	-	19.0	-	19.0
Contingencies, Defense	-	-	-	-	-	-	15.0	-	-	15.0	-	15.0
Salaries & Expenses, Ct. of Military Appeals, Defense	-	-	-	-	-	-	0.5	-	-	0.5	-	a 0.5
<b>TOTAL - Operation and Maintenance</b>	<b>1,033.7</b>	<b>771.4</b>	<b>3,351.0</b>	<b>209.5</b>	<b>702.5</b>	<b>72.2</b>	<b>5,305.4</b>	<b>-</b>	<b>-</b>	<b>11,446.0</b>	<b>-</b>	<b>11,446.0</b>
<b>PROCUREMENT</b>												
Procurement of Equipment and Missiles, Army	-	112.6	2,167.9	1.3	114.2	3.4	244.2	-	-	2,643.7	-124.5	2,519.2
Procurement of Aircraft and Missiles, Navy	441.8	4.2	2,360.1	-	13.4	25.8	262.1	-	-	3,107.4	-72.7	3,034.7
Shipbuilding and Conversion, Navy	805.8	-	1,731.5	20.0	-	34.0	69.4	-	-	2,660.7	+258.5	2,919.2
Other Procurement, Navy	134.9	18.8	611.9	-	14.7	7.2	164.0	-	-	951.5	-47.9	903.6
Procurement, Marine Corps	-	-	199.2	-	43.1	-	9.8	-	-	252.1	+3.9	256.0
Aircraft Procurement, Air Force	833.7	150.9	1,480.5	671.6	35.4	9.7	723.2	-	-	3,905.0	-342.6	3,562.4
Missile Procurement, Air Force	2,238.9	17.5	79.7	-	-	-	121.7	-	-	2,457.8	+1.2	2,459.0
Other Procurement, Air Force	185.1	174.0	264.6	32.7	6.0	21.6	340.8	-	-	1,028.8	-68.6	956.2
Procurement, Defense Agencies	-	-	-	-	-	-	36.9	-	-	36.9	-	36.9
<b>TOTAL - Procurement</b>	<b>4,640.2</b>	<b>478.0</b>	<b>8,895.4</b>	<b>725.6</b>	<b>226.8</b>	<b>101.7</b>	<b>1,972.1</b>	<b>-</b>	<b>-</b>	<b>17,039.9</b>	<b>-392.7</b>	<b>16,647.1</b>

Department of Defense  
FY 1963 BUDGET PROGRAMS AND NEW OBLIGATIONAL AUTHORITY

By Appropriation Title

(Millions of Dollars)

Appropriation Title	Strategic Retaliatory Forces	Continental Air and Missile Defense Forces	General Purpose Forces	Airlift and Sealift Forces	Reserve and Guard Forces	Research and Develop- ment	General Support	Civil Defense	Military Assis- tance	Total Programs (TOA)	Financing Adjust- ments	New Obli- gational Authority
<b>RESEARCH, DEVELOPMENT, TEST, AND EVALUATION</b>												
Research, Development, Test, and Evaluation, Army	-	0.8	106.3	-	-	1,177.5	1.9	-	-	1,286.5	-	1,286.5
Research, Development, Test, and Evaluation, Navy	380.0	3.0	168.3	-	-	921.7	4.5	-	-	1,477.5	-	1,477.5
Research, Development, Test, and Evaluation, Air Force	717.4	27.5	120.0	69.6	-	2,501.5	470.4	-	-	3,906.4	-230.6	3,675.8
Research, Development, Test, & Eval., Defense Agencies	-	-	-	-	-	250.0	197.9	-	-	447.9	-	447.9
Emergency Fund, Defense	-	-	-	-	-	120.4	-	-	-	120.4	-	120.4
<b>TOTAL - Research, Development, Test, and Evaluation</b>	<b>1,097.4</b>	<b>31.3</b>	<b>394.6</b>	<b>69.6</b>	<b>-</b>	<b>4,971.1</b>	<b>674.7</b>	<b>-</b>	<b>-</b>	<b>7,238.7</b>	<b>-230.6</b>	<b>7,008.1</b>
<b>MILITARY CONSTRUCTION</b>												
Military Construction, Army	-	7.0	33.7	-	-	8.3	112.5	-	-	161.5	-10.1	151.4
Military Construction, Navy	22.4	1.1	58.7	-	-	18.6	102.4	-	-	203.1	-41.7	161.4
Military Construction, Air Force	514.0	19.7	18.7	6.6	-	74.0	147.1	-	-	780.1	-	780.1
Military Construction, Defense Agencies	-	-	-	-	-	-	35.4	-	-	35.4	+0.3	35.7
Military Construction, Army Reserve	-	-	-	-	10.0	-	-	-	-	10.0	-2.0	8.0
Military Construction, Naval Reserve	-	-	-	-	7.8	-	-	-	-	7.8	-0.8	7.0
Military Construction, Air Force Reserve	-	-	-	-	4.0	-	-	-	-	4.0	+1.0	5.0
Military Construction, Army National Guard	-	-	-	-	10.0	-	-	-	-	10.0	-3.0	7.0
Military Construction, Air National Guard	-	-	-	-	14.5	-	-	-	-	14.5	-0.5	14.0
Loran Stations, Defense	-	-	-	-	-	-	20.0	-	-	20.0	-	20.0
<b>TOTAL - Military Construction</b>	<b>536.4</b>	<b>27.8</b>	<b>111.1</b>	<b>6.6</b>	<b>46.3</b>	<b>100.9</b>	<b>417.4</b>	<b>-</b>	<b>-</b>	<b>1,246.4</b>	<b>-56.8</b>	<b>1,189.5</b>
<b>FAMILY HOUSING</b>												
Family Housing, Defense	-	-	-	-	-	-	706.6	-	-	706.6	-109.7	596.9
<b>CIVIL DEFENSE</b>												
Operation and Maintenance, Civil Defense	-	-	-	-	-	-	-	72.8	-	72.8	-	72.8
Research, Civil Defense	-	-	-	-	-	-	-	38.0	-	38.0	-	38.0
Research & Development, Shelter, & Constr., Civil Def. (Proposed for separate transmittal)	-	-	-	-	-	-	-	61.9	-	61.9	-	61.9
<b>TOTAL - Civil Defense</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>172.7</b>	<b>-</b>	<b>172.7</b>	<b>-</b>	<b>172.7</b>
<b>SUB-TOTAL - MILITARY FUNCTIONS</b>	<b>8,500.5</b>	<b>1,948.6</b>	<b>18,081.7</b>	<b>1,364.8</b>	<b>1,957.7</b>	<b>5,481.2</b>	<b>13,688.8</b>	<b>172.7</b>	<b>-</b>	<b>51,196.2</b>	<b>-1,235.1</b>	<b>49,961.1</b>
<b>MILITARY ASSISTANCE</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,605.1</b>	<b>1,605.1</b>	<b>-280.1</b>	<b>1,325.0</b>
<b>GRAND TOTAL - MILITARY FUNCTIONS AND MILITARY ASSISTANCE</b>	<b>8,500.5</b>	<b>1,948.6</b>	<b>18,081.7</b>	<b>1,364.8</b>	<b>1,957.7</b>	<b>5,481.2</b>	<b>13,688.8</b>	<b>172.7</b>	<b>1,605.1</b>	<b>52,801.3</b>	<b>-1,515.2</b>	<b>51,286.1</b>
<b>RECAPITULATION:</b>												
Department of the Army	-	291.2	6,220.4	28.4	1,098.0	1,233.7	3,316.9	-	-	12,188.7	-489.6	11,699.1
Department of the Navy	1,947.2	134.9	8,720.7	53.3	371.2	1,089.8	2,864.3	-	-	15,181.5	+74.2	15,255.7
Department of the Air Force	6,553.3	1,522.5	3,140.6	1,283.1	488.5	2,787.3	5,091.3	-	-	20,866.6	-710.2	20,156.4
Defense Agencies/OSD	-	-	-	-	-	370.4	2,416.3	-	-	2,786.6	-109.4	2,677.2
Office of Civil Defense	-	-	-	-	-	-	-	172.7	-	172.7	-	172.7
Military Assistance	-	-	-	-	-	-	-	-	1,605.1	1,605.1	-280.1	1,325.0

a/ Includes proposed supplemental appropriation for civilian pay increase.

b/ Included within "Operation and Maintenance, Air Force" in Budget Document presentation.

c/ Includes proposed supplemental appropriations of \$394.7 million: civilian pay increase, \$113.1 million; retention of Army reservists, \$113.3 million; basic allowance for quarters, \$83.8 million; readjustment pay for reservists, \$5.2 million; military per diem, \$17.4 million; and civil defense \$61.9 million.

TABLE 22

Department of Defense

FY 1964 BUDGET PROGRAMS AND NEW OBLIGATIONAL AUTHORITY

By Appropriation Title

(Millions of Dollars)

Appropriation Title	Strategic Retaliatory Forces	Continental Air and Missile Defense Forces	General Purpose Forces	Airlift and Sealift Forces	Reserve and Guard Forces	Research and Develop- ment	General Support	Civil Defense	Military Assis- tance	Total Programs (TOA)	Financing Adjus- tments	New Obliga- tional Authority (Appro- priation)
<b>MILITARY PERSONNEL</b>												
Military Personnel, Army	-	92.6	2,626.0	10.1	117.6	38.8	1,150.0	-	-	4,035.0	-150.0	3,885.0
Military Personnel, Navy	56.2	48.9	1,569.6	23.8	70.8	55.4	971.4	-	-	2,796.0	-120.0	2,676.0
Military Personnel, Marine Corps	0.2	0.6	487.1	-	17.4	0.9	172.4	-	-	678.6	-	678.6
Military Personnel, Air Force	1,132.4	485.4	620.0	334.2	37.4	143.2	1,425.4	-	-	4,178.0	-30.0	4,148.0
Reserve Personnel, Army	-	-	-	-	210.1	-	-	-	-	210.1	-	210.1
Reserve Personnel, Navy	-	-	-	-	92.3	-	-	-	-	92.3	-	92.3
Reserve Personnel, Marine Corps	-	-	-	-	28.5	-	-	-	-	28.5	-	28.5
Reserve Personnel, Air Force	-	-	-	-	55.1	-	-	-	-	55.1	-	55.1
National Guard Personnel, Army	-	-	-	-	240.3	-	-	-	-	240.3	-	240.3
National Guard Personnel, Air Force	-	-	-	-	58.3	-	-	-	-	58.3	-	58.3
Retired Pay, Defense	-	-	-	-	-	-	1,163.0	-	-	1,163.0	-	1,163.0
Military Personnel (Proposed for separate transmittal)	-	-	-	-	-	-	-	-	-	900.0	-	900.0
<b>TOTAL - Military Personnel</b>	<b>1,188.8</b>	<b>627.5</b>	<b>5,302.7</b>	<b>368.1</b>	<b>927.8</b>	<b>238.3</b>	<b>4,882.2</b>	<b>-</b>	<b>-</b>	<b>14,435.2</b>	<b>-300.0</b>	<b>14,135.2</b>
<b>OPERATION AND MAINTENANCE</b>												
Operation and Maintenance, Army	-	63.7	1,296.2	14.2	155.9	-	1,865.2	-	-	3,395.2	-	3,395.2
Operation and Maintenance, Navy	167.7	53.5	1,513.1	10.3	87.5	28.6	1,073.3	-	-	2,934.0	-	2,934.0
Operation and Maintenance, Marine Corps	-	-	86.4	-	4.6	-	101.3	-	-	192.3	-	192.3
Operation and Maintenance, Air Force	869.6	624.1	607.6	196.6	101.2	23.7	1,962.2	-	-	4,385.0	-	4,385.0
Operation and Maintenance, Defense Agencies	-	-	-	-	-	-	451.4	-	-	451.4	-	451.4
Operation and Maintenance, Army National Guard	-	-	-	-	176.6	-	-	-	-	176.6	-	176.6
Operation and Maintenance, Air National Guard	-	-	-	-	222.7	-	-	-	-	222.7	-	222.7
National Board for the Promotion of Rifle Practice, Army	-	-	-	-	-	-	0.5	-	-	0.5	-	0.5
Claims, Defense	-	-	-	-	-	-	19.0	-	-	19.0	-	19.0
Contingencies, Defense	-	-	-	-	-	-	15.0	-	-	15.0	-	15.0
Salaries & Expenses, Ct. of Military Appeals, Defense	-	-	-	-	-	-	0.5	-	-	0.5	-	0.5
<b>TOTAL - Operation and Maintenance</b>	<b>1,037.3</b>	<b>741.3</b>	<b>3,503.3</b>	<b>221.1</b>	<b>748.5</b>	<b>52.3</b>	<b>5,488.4</b>	<b>-</b>	<b>-</b>	<b>11,792.2</b>	<b>-</b>	<b>11,792.2</b>
<b>PROCUREMENT</b>												
Procurement of Equipment and Missiles, Army	-	75.6	2,711.5	1.8	157.6	3.9	365.6	-	-	3,316.0	-114.0	3,202.0
Procurement of Aircraft and Missiles, Navy	672.5	3.9	2,323.4	-	13.8	29.8	67.5	-	-	3,111.0	-45.0	3,066.0
Shipbuilding and Conversion, Navy	702.3	-	1,629.0	22.0	-	-	28.0	-	-	2,381.3	-71.3	2,310.0
Other Procurement, Navy	133.4	99.4	748.4	-	16.8	19.0	214.5	-	-	1,231.5	-23.5	1,208.0
Procurement, Marine Corps	-	-	176.1	-	38.0	-	7.5	-	-	221.6	-13.9	207.7
Aircraft Procurement, Air Force	641.4	103.9	1,395.1	768.0	34.8	10.4	1,002.9	-	-	3,956.5	-397.5	3,559.0
Missile Procurement, Air Force	1,974.4	17.3	206.3	-	-	-	207.0	-	-	2,405.0	-228.0	2,177.0
Other Procurement, Air Force	142.7	191.9	253.0	33.8	8.7	37.2	339.0	-	-	1,006.3	-54.8	951.5
Procurement, Defense Agencies	-	-	-	-	-	-	43.6	-	-	43.6	-	43.6
<b>TOTAL - Procurement</b>	<b>4,266.7</b>	<b>492.0</b>	<b>9,442.8</b>	<b>825.6</b>	<b>269.7</b>	<b>100.3</b>	<b>2,275.6</b>	<b>-</b>	<b>-</b>	<b>17,672.8</b>	<b>-948.0</b>	<b>16,724.8</b>

Department of Defense  
FY 1964 BUDGET PROGRAMS AND NEW OBLIGATIONAL AUTHORITY

By Appropriation Title  
(Millions of Dollars)

Appropriation Title	Strategic Retaliatory Forces	Continental Air and Missile Defense Forces	General Purpose Forces	Airlift and Sealift Forces	Reserve and Guard Forces	Research and Develop- ment	General Support	Civil Defense	Military Assis- tance	Total Programs (TOA)	Financing Adjust- ments	New Obli- gational Authority (Appro- priation)
<b>RESEARCH, DEVELOPMENT, TEST, AND EVALUATION</b>												
Research, Development, Test, and Evaluation, Army	-	-	103.3	-	-	1,361.1	5.5	-	-	1,469.9	-	1,469.9
Research, Development, Test, and Evaluation, Navy	209.6	4.5	242.1	-	0.2	1,111.5	4.9	-	-	1,572.9	-	1,572.9
Research, Development, Test, and Evaluation, Air Force	374.8	14.3	232.7	15.0	-	2,535.4	557.6	-	-	3,729.8	-108.0	3,621.8
Research, Development, Test, & Eval., Defense Agencies	-	-	-	-	-	280.0	167.4	-	-	447.4	-	447.4
Emergency Fund, Defense	-	-	-	-	-	150.0	-	-	-	150.0	-	150.0
<b>TOTAL - Research, Development, Test, &amp; Evaluation</b>	<b>584.4</b>	<b>18.8</b>	<b>578.1</b>	<b>15.0</b>	<b>0.2</b>	<b>5,438.0</b>	<b>735.4</b>	<b>-</b>	<b>-</b>	<b>7,370.0</b>	<b>-108.0</b>	<b>7,262.0</b>
<b>MILITARY CONSTRUCTION</b>												
Military Construction, Army	-	9.4	64.5	0.1	-	15.0	160.6	-	-	249.5	-	249.5
Military Construction, Navy	3.4	4.6	120.1	-	-	41.7	100.1	-	-	269.9	-	269.9
Military Construction, Air Force	204.2	83.4	88.8	13.4	-	52.7	189.1	-	-	631.6	-3.4	628.2
Military Construction, Defense Agencies	-	-	-	-	-	-	30.2	-	-	30.2	-0.3	29.9
Military Construction, Army Reserve	-	-	-	-	6.0	-	-	-	-	6.0	-1.5	4.5
Military Construction, Naval Reserve	-	-	-	-	7.0	-	-	-	-	7.0	-1.0	6.0
Military Construction, Air Force Reserve	-	-	-	-	5.0	-	-	-	-	5.0	-1.0	4.0
Military Construction, Army National Guard	-	-	-	-	6.0	-	-	-	-	6.0	-2.5	3.5
Military Construction, Air National Guard	-	-	-	-	18.0	-	-	-	-	18.0	-2.0	16.0
Loran Stations, Defense	-	-	-	-	-	-	20.5	-	-	20.5	-	20.5
<b>TOTAL - Military Construction</b>	<b>207.6</b>	<b>97.4</b>	<b>273.4</b>	<b>13.5</b>	<b>42.0</b>	<b>109.4</b>	<b>500.5</b>	<b>-</b>	<b>-</b>	<b>1,243.7</b>	<b>-11.7</b>	<b>1,232.0</b>
<b>FAMILY HOUSING</b>												
Family Housing, Defense	-	-	-	-	-	-	739.6	-	-	739.6	-5.2	734.4
<b>CIVIL DEFENSE</b>												
Operation and Maintenance, Civil Defense	-	-	-	-	-	-	-	82.2	-	82.2	-	82.2
Research & Development, Shelter, & Construction, Civil Defense	-	-	-	-	-	-	-	217.8	-	217.8	-	217.8
<b>TOTAL - Civil Defense</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>300.0</b>	<b>-</b>	<b>300.0</b>	<b>-</b>	<b>300.0</b>
<b>SUB-TOTAL - MILITARY FUNCTIONS</b>	<b>7,284.8</b>	<b>1,977.0</b>	<b>19,100.0</b>	<b>1,443.3</b>	<b>1,988.4</b>	<b>5,938.3</b>	<b>14,621.7</b>	<b>300.0</b>	<b>-</b>	<b>53,553.5</b>	<b>-1,372.9</b>	<b>52,180.6</b>
<b>MILITARY ASSISTANCE</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,630.0</b>	<b>1,630.0</b>	<b>-150.0</b>	<b>1,480.0</b>
<b>GRAND TOTAL - MILITARY FUNCTIONS AND MILITARY ASSISTANCE</b>	<b>7,284.8</b>	<b>1,977.0</b>	<b>19,100.0</b>	<b>1,443.3</b>	<b>1,988.4</b>	<b>5,938.3</b>	<b>14,621.7</b>	<b>300.0</b>	<b>1,630.0</b>	<b>55,183.5</b>	<b>-1,522.9</b>	<b>53,660.6</b>
<b>RECAPITULATION:</b>												
Department of the Army	-	241.2	6,801.4	26.2	1,070.1	1,418.8	3,547.4	-	-	13,105.1	-268.0	12,837.1
Department of the Navy	1,945.3	215.5	8,895.1	56.1	377.1	1,266.9	2,740.9	-	-	15,516.9	-274.7	15,242.2
Department of the Air Force	5,339.5	1,520.3	3,403.5	1,361.0	541.2	2,802.6	5,683.2	-	-	20,651.3	-824.7	19,826.6
Defense Agencies/OSD	-	-	-	-	-	430.0	2,650.2	-	-	3,080.2	-5.5	3,074.7
Office of Civil Defense	-	-	-	-	-	-	-	300.0	-	300.0	-	300.0
Military Assistance	-	-	-	-	-	-	-	-	1,630.0	1,630.0	-150.0	1,480.0
Proposed for separate transmittal (Undistributed)	-	-	-	-	-	-	-	-	-	900.0	-	900.0

a/ Includes \$900.0 million proposed for separate transmittal under proposed legislation -- not distributed by budget program, military department or appropriation title.